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Advanced Management

MODERN MANAGEMENT

IN THIS ISSUE

Management Prepares for the Future

- *Industrial Mobilization*
- *Developing Creative Leadership*
- *Blueprint for Effective Communications*
- *Selling Quality Improvement to Employees*
- *Pension Plans—Trends and Significance*
- *The "Ratio-Delay" Method in Practice*
- *Time Study Research*
- *SAM's Office Standards Project*

SEPTEMBER 1950

How to get top production

MILITARY AND / OR CIVILIAN

under Controlled Inventories

Two "scarce-material" problems already face most manufacturers:

1. On military orders – exact needs for parts and materials must be projected on the basis of actual production schedules, and separately recorded.
2. On civilian orders – use of scarce materials may be curtailed, allocations made to most needed lines, inventories kept within "controlled" limits.

Controlling Inventories Is Our Business

During World War II, Remington Rand was the leading supplier of Inventory Control Systems to American business. Then, as today, we were the only supplier able to analyze your needs on a completely impartial basis—then supply the *right* solution based on manual or machine systems, or a judicious *combination* of both.

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We make them all

Machine Method. When volume paperwork is your problem, Remington Rand Punched-Card Machines process thousands of cards per hour, automatically produce summaries and breakdowns days or weeks faster than might otherwise be possible.

Remington Rand INC

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COSTS OR RESULTS?

EVERY so often we hear or read of someone who has developed a formula for determining the amount of money which any company should spend on human relations or personnel programs. These formulae fans become so interested in controlling costs that they neglect to consider results.

It is generally recognized that sound human relations policies and practices are profitable. Personnel and industrial relations activities carefully selected and properly installed will pay for themselves and also contribute to profits through increased production, a higher quality product, and a better and more contented group of employees. Effective human relations implies careful planning, sound organization, and effective controls. These are the bases of good management.

Organization is the framework upon which successful business operations are developed. Human relations and every other phase of the business situation hinges on organization. Sound organization presupposes established lines of communication, well defined duties, and a proper delegation of responsibility and commensurate authority. Flaws in organization often lie concealed. The customary way of doing things seems natural and right. Errors and difficulties pass unnoticed or excused as incidental or unusual occurrences when a real search should be made for the underlying causes. Organization planning and design is not a one-time job. It is continuous. Organization structures and practices should be surveyed regularly, weaknesses discovered and constructive corrective measures applied.

Sound employment practices and procedures are fundamental to high productivity and good employee relations. Recruitment can be planned to insure the continuous flow of desirable applicants at minimum cost. Scientific selection procedures and devices which consider "individual differences" are available to replace guesswork and chance in hiring employees.

Effective worker performance implies a continuous education and training program. This program should cover the worker's present job, his next job and provide him with current information about his company.

Supervisors frequently do not understand company policies or the part which they should play in them; often they are untrained in the principles of good leadership, and feel more of an identity with the workers than with management. Supervisory training is essential to correct this.

Planned executive conferences keep busy executives well informed, permit the sharing of information and points of view, and lead to increased unity and coordination in the organization.

SERVICE to employees is as essential to productive efficiency as is maintenance service to equipment and facilities. Employee services must avoid paternalism and be planned to meet the needs of the particular situation. Carefully planned employee services contribute to worker morale, happiness, and well being which can result only in increased worker efficiency.

Personnel programs, to be effective, must be planned. Planning must be based on the results of research. Personnel research, then is fundamental to successful personnel and human relations. Personnel records provide the primary source of material for personnel research. The personnel record system should be tailor made; concise, easy to use, economical, and effective. Personnel research is a must if personnel objectives are to be attained.

Scientific methods of determining employee compensation are essential to employee satisfaction which in turn is reflected in productivity. The content of the job must be determined, analyzed and evaluated; performance standards must be established and provision should be made for offering workers extra pay for extra work; plans should be developed to recognize meritorious performance rather than to permit seniority to govern. The adherence to strict seniority principles places a premium on mediocrity and this result should be avoided at all costs.

Effective wage administration implies the use of job evaluation to consider the value of the job and merit rating the worth of the individual. Promotions in pay as well as in position should be based on meritorious performance.

Worker productivity is a matter of continuous concern to management. The leveling of effort and base compensation has accentuated this problem. Low productivity increases manufacturing costs while high productivity makes possible lowered unit costs and more economical manufacture. Financial incentive plans have proved to be highly successful aids in increasing worker productivity. An incentive plan, to be effective, must be evolved to fit the needs of the particular situation. It must be properly installed and simple enough to be easily understood by all concerned.

Generally, these formulae for determining human relations expenditures try to establish the number of dollars per productive employee that should be spent on personnel work. Such formulae *consider costs but ignore results;* therefore, they are of little value.

Whether for war or for peace, for the protection of our Nation or for increased profit, sound human relations programs are a *must* for now and for the future.

DILLARD E. BIRD

Planning for National Security

By HUBERT E. HOWARD

Chairman, Munitions Board, Department of Defense

First hand information about industrial mobilization from the key-executive of the Munitions Board. The Board's responsibilities for mobilization planning and supply management are reviewed in the light of current conditions.

A NATION'S ability to mobilize its industrial strength rapidly and effectively is as much a measure of its potential success in modern warfare as the size of its population, its wealth and resources, its weapons, and the size of its military forces.

This is one of the lessons we learned from World War II, and one from which we have profited. We lost a great deal of time in preparing for that war. We found that we could marshal our armed forces and train them faster than we could produce the weapons and equipment necessary to put them in combat.

Since that time a great many things have been done to reduce that time lag and to put our mobilization planning on a firmer basis. The National Security Act of 1947 created a national security team, responsive to the President. It consists of the National Security Council, Central Intelligence Agency, the National Security Resources Board, and the Department of Defense. This team is informally known as the Organization for National Security.

The National Security Resources Board, and the Munitions Board of the Department of Defense, are the two agencies most directly concerned with mobilization of industry. The National Security Resources Board was established by Congress to advise the President on the coordination of military, industrial and civilian mobilization. It is a planning and advisory agency and is concerned with national mobilization planning, and measures to be taken in peacetime to keep our resources in readiness for mobilizations.

The Munitions Board's responsibilities are confined to the military aspects of industrial mobilization—the marshalling of the industrial capacity necessary to meet military requirements. It is a statutory agency under the National Security Act of 1947.

SPEED AND ECONOMY

The Munitions Board's functions fall generally into two main classes (1) Industrial Mobilization Planning, and (2) Supply Management. The Board is concerned with the planning required to produce as quickly as possible the equipment necessary to fight a war and it coordinates and integrates the procurement practices of the three Services so that they will function on an efficient and businesslike basis.

As a basis for its industrial mobilization planning the Board must know the kind and amount of equipment it must plan for, in what quantities, and when deliveries will be required. It receives guidance in this work from the Joint Chiefs of Staff who make the plans for the kind of war we might have to fight and determine where and how it most likely would be fought. With this information the three military departments estimate the kind, amount, and rate of delivery of products. The Munitions Board screens and coordinates these requirements when they have been received from the services. Then, in collaboration with the National Security Resources Board, a determination is made as to whether the industry of the nation can produce the kind and number of items required.

The process of determining requirements of many thousands of items is necessarily long and complex. It is necessary, therefore, to do this on a priority basis with first attention given to groups of items for which advance mobilization planning with industry is particularly important. Planning with industry for production is now near completion on the first list of 700 highly important items. When this is completed we will add additional lists until we have reached a total of between 4,000 to 5,000 items which seems to be a suitable number to use as a base for long-range industrial mobilization planning.

A result of this planning is that industry knows what it will be expected to produce, what quantities will be required, and what production schedules must be met. This makes it possible then for industry to make its own advance plans for equipment, materials, production layouts, manpower, and services. Planning for these items also provides essential information on other requirements, such as manpower, construction, components, production equipment, electric power, petroleum, fuel and water.

The Munitions Board is working on more than 70 programs designed either to improve current industrial activities or to perfect industrial mobilization plans and supply management. It is the Munitions Board's job to bring the ingredients of production, whether in peace or in war, together in proper time. These ingredients are plants, tools, materials, and manpower.

A total of 453 manufacturing plants and other war facilities built by the Government during or before World War II are retained in reserves for wartime use. Of this total, 258 are in the Departmental Industrial Reserve, under the direct control of the military departments. These facilities include 54 arsenals, shipyards, and similar military installations. In the National Industrial Reserve are 195 plants and facilities. These include plants that have been or may be sold or leased, subject to the

National Security Clause. This Clause stipulates that the plants be kept in condition to revert to planned war production within 120 days.

Of the 453 plants in both reserves, 422 are capable of manufacturing products required by the three services, 22 are research facilities, and nine are oil pipelines, terminals or other non-manufacturing facilities. Sixty-six of the plants produce basic materials for which the National Security Resources Board has assumed mobilization planning responsibility. The military departments are responsible for planning mobilization production of all other plants in the two reserves.

In another highly important reserve are 126,000 machine tools and industrial equipment items. These reserves are owned by the Army, Navy and Air Force and were obtained from Government surpluses. They are in addition to those in reserve plants. Additional tools and equipment are being placed in the National Industrial Equipment Reserve, which now comprises about 10,000 major items.

These reserves will make it possible to equip plants and get them into production with a minimum of delay.

Another important program of the Munitions Board is designed to shorten the period between the award of a military contract and the time when desired production rates can be reached. Items for which there are no commercial substitutes, which would be required in quantity during the first two years of war, and which would require considerable time before reaching desired production rates have been selected for special study. These studies are made to discover production "bottlenecks" which might develop in wartime and to devise manufacturing methods which will make it possible to reach required production rates as rapidly as possible.

In some cases, special tools, jigs, and fixtures needed to produce these items are being purchased, and pilot runs of small quantities of test models are being made to train workers.

The stockpiling of strategic and critical materials is a major program of the Munitions Board. A compelling reason for stockpiling lies in the fact that at the outset of a war we are likely to be denied access to the principal world sources of many strategic materials.

To reduce our dependence upon outside sources in time of war, 65 types of materials are being placed in the stockpile. These include such basic metals as tin, tungsten, copper, manganese, chrome, nickel, and aluminum; minerals such as mica, asbestos, and radio grade quartz crystals; rubber and rope fibre; industrial abrasives such as corundum and diamond bort; and a few drugs, chemicals, and oils. We have now in the stockpile, or financed, approximately 2.3 billion dollars worth of materials, of which 1.6 billion dollars worth are actually in the stockpile with over 700 million dollars worth under contract.

Another major program of the Board concerns manpower planning. The Department of Defense must be prepared to assist in solving manpower problems in cooperation with other Federal agencies. Planning covers such areas as the problems of providing adequate manpower for the armed forces and for military contractors and suppliers, and includes such areas as manpower priorities, occupational deferments, wage stabilization problems, adjustment of labor disputes, and methods of obtaining workers for essential production.

POWER AND FLEXIBILITY

In the field of supply management the Munitions Board works to bring about economical and efficient military purchasing and distribution without sacrifice to the fighting power of the armed forces. The supply systems of the Army, Navy, and Air Force are much alike in many respects, but there are significant differences. The objective of planning in this field is to develop a common system that is flexible enough to complement and supplement the needs of the three departments and to enable each to service the others in an emergency.

On the purchasing side of the military supply system, the Board is working on programs to improve efficiency. One of these involves the establishment of infirm procurement regulations. These form a basis for common and improved practices and procedures such as methods of procurement, contract forms and clauses, patents and copyrights, bonds and insurance, taxes, labor, material inspection, contract cost principles, and pricing and profit policies.

Coordination of military procurement is an important program. One method of coordination is to assign responsibility for purchasing items or groups of items to a single department, such as the purchase of food for the three services by the Army Quartermaster General. Another method of coordination is to have one department contract for all military purchases from a particular plant. This is limited to aircraft purchases. A third example of purchase assignment is joint procurement, in which buying is done by jointly staffed agencies. At present only petroleum and medical supplies are purchased in this way.

Of major importance in programs to improve the general efficiency and effectiveness of supply management and procurement is the development of a cataloging system for the millions of items purchased by the Army, Navy and Air Force. The object of this program is to have each item used by the military services described by the same name, and to have it carry the same catalog number. It is estimated that there were more than five million listings of items bought during the last war. A great many of these were duplications, which resulted in confusion in distribution and waste. We expect to reduce this figure to approximately 1,700,000. When completed the catalog system will save an enormous amount of time, make it possible for one Service to requisition items from another, and will make it unnecessary to carry large stocks of identical items simply because they carry different names or numbers.

A companion to cataloging is the standardization program whereby we are developing common specifications for items that are used by more than one military service. When completed, we hope to produce from 8,000 to 10,000 specifications covering the majority of the items purchased.

Businessmen are playing an active and important part in the programs of the Munitions Board. We have the help of 26 industry advisory committees who assist the Board in dealing with problems arising in their particular industries. On these committees are over 700 industrialists, engineers, and special representatives covering a cross section of industry, who are giving wholehearted and helpful cooperation in helping the Board make its plans workable and practicable.

ORGANIZATION FOR NATIONAL SECURITY

AS SET FORTH IN THE NATIONAL SECURITY ACT OF 1947 AS AMENDED

PRESIDENT OF THE UNITED STATES

NATIONAL SECURITY COUNCIL

MISSION

Advise the President on integration of domestic, foreign and military policy.

DUTIES

1. Recommend action re U.S. actual and potential military power, based on objectives, commitments and risks.
2. Recommend action re matters of common interest to federal activities concerned with national security.

MEMBERSHIP

Permanent: The President
The Vice President
Secretaries of : State and Defense
Chairman, National Security Resources Board

Optional: Secretaries and Under Secretaries of other executive departments and the military departments.
Chairman, Munitions Board
Chairman, Research and Development Board

CENTRAL INTELLIGENCE AGENCY

MISSION

Coordinate intelligence activities of federal agencies concerned with national security.

DUTIES

1. Advise National Security Council on national security intelligence activities of federal departments and agencies.
2. Recommend necessary coordination of such activities to National Security Council.
3. Correlate, evaluate and disseminate national security intelligence.
4. Render intelligence services for other federal departments and agencies.

SECRETARY OF DEFENSE

MISSION

Serve as principal assistant to the President in all matters relating to the Department of Defense.

DUTIES

Exercise direction, authority and control over the Department of Defense

DEPUTY SECRETARY OF DEFENSE

Responsible for the supervision and coordination of the activities of the Department of Defense as directed by the Secretary of Defense. Acts for, and exercises the power of, the Secretary of Defense during his absence or disability.

NATIONAL SECURITY RESOURCES BOARD

MISSION

Advise the President re coordination of military, industrial and civilian mobilization.

DUTIES

Develop policies and programs for:

1. Manpower mobilization.
2. Effective war-time use of resources, balancing military and civilian requirements.
3. Unified war-time federal effort in production, procurement, distribution, transportation of military and civilian supplies, materials and products.
4. Determining status of potential war-time supply vs needs for manpower, resources and productive facilities.
5. Strategic and critical material reserves and their conservation
6. Strategic relocation of key industrial, service, government and economic activities.

MEMBERSHIP

Heads of such federal departments and agencies as the President directs.

Presently:
Secretaries of: State, Treasury, Defense, Interior, Agriculture, Commerce and Labor.

ASSISTANT SECRETARY (COMPTROLLER)

ASSISTANT SECRETARY

ASSISTANT SECRETARY

JOINT CHIEFS OF STAFF

MISSION

Principal military advisors to the President, the National Security Council and the Secretary of Defense.

DUTIES

1. Strategic planning for and direction of military forces.
2. Joint logistic plans and assignment of logistic responsibility to services thereunder.
3. Establish unified commands in strategic areas.
4. Formulate joint training policies.
5. Formulate coordinating military education policies for services.
6. Review major military material and personnel requirements under strategic and logistic plans.
7. Provide U.S. representation on Military Staff Committee of United Nations.

MEMBERSHIP

Chairman, Joint Chiefs of Staff
Chief of Staff, Army
Chief of Naval Operations
Chief of Staff, Air Force

JOINT STAFF

DUTIES

As directed by the Joint Chiefs of Staff.

MEMBERSHIP

Not to exceed a total of 210 officers from Army, Navy and Air Force, approximately equal numbers from each.

ARMED FORCES POLICY COUNCIL

MISSION

Advise the Secretary of Defense on broad armed forces policy matters.

MEMBERSHIP

Secretary of Defense, Chairman
Deputy Secretary of Defense
Chairman, Joint Chiefs of Staff
Secretaries of: Army, Navy, Air Force
Chief of Staff, Army
Chief of Naval Operations
Chief of Staff, Air Force

MUNITIONS BOARD

MISSION

Perform the following duties under the Secretary of Defense in support of J C S strategic and logistic plans:

DUTIES

1. Coordinate Department of Defense activities in industrial matters, their procurement, production and distribution plans.
2. Plan for military aspects of industrial mobilization.
3. Assign inter-service procurement responsibility; plan for specification standardization and for single purchase authority allocation.
4. Prepare potential production and personnel estimates for evaluating logistic feasibility of strategic operations.
5. Determine priorities within military procurement programs.
6. Supervise assigned subordinate agencies.
7. Establish most efficient inter-service logistic organization.
8. Correlate and develop policies for military vs civilian requirements, particularly on strategic and critical materials through liaison with other federal activities.
9. Reconcile J C S logistic requirements with those of supply agencies, recommending action to the Secretary of Defense.

MEMBERSHIP

Chairman of the Board
Under or Assistant Secretaries of: Army, Navy, Air Force

RESEARCH & DEVELOPMENT BOARD

MISSION

Advise Secretary of Defense on status of scientific research in re national security and assure adequate provision for research and development on scientific problems in re national security.

DUTIES

1. Prepare integrated military research and development program.
2. Advise on scientific research trends re national security, and steps to assure constant progress.
3. Coordinate research and development among the services, and allocate responsibility for specific joint programs.
4. Formulate Department of Defense policy on research and development matters outside the Department.
5. Examine interaction of research and development and strategy, and advise J C S thereon.

MEMBERSHIP

Chairman of the Board
Two representatives each from Army, Navy, Air Force, designated by the Secretaries of these departments.

DEPARTMENT OF THE ARMY

SECRETARY

DEPARTMENT OF THE NAVY

SECRETARY

DEPARTMENT OF THE AIR FORCE

SECRETARY

Creative Leadership

By ALFRED H. WILLIAMS

President, Federal Reserve Bank of Philadelphia

Problems created by our "business civilization" and its "laboristic economy" present new challenges to business leadership. Mr. Williams presents some fundamental requirements for "Top Leadership".

IN AMERICA we have what is essentially a business civilization. If there is one fact that sharply characterizes American life, it is our preoccupation with business. Most of the reveries of businessmen concern business. It is a major topic of conversation in the locker room at the golf club or between rounds at the bridge table. Let us examine this field of business for the quality of its leadership.

From the close of the Civil War to the turn of the century, business leadership was essentially autocratic. The competitive struggle was keen and ruthless. The men who forged to the front were captains of industry, economic buccaneers, men of strong, imperious wills whose motto was "Ask no quarter; give no quarter." These men of blood and iron are typed in John D. Rockefeller, Sr., James J. Hill, Andrew Carnegie, Gustavus Swift, and H. C. Frick. With such men in the driver's seat, our rate of progress, as measured by production, was rapid and constant.

This period, 1865-1900, may be called the period of *Autocratic Business Leadership.*

With the passing of our physical frontiers at the turn of the century, cynical observers, notably Henry Adams, said in effect: "America has now matured. Watch for scar tissue to form in her arteries." But the opposite occurred. We received a new lease on life. Our lush growth was to continue; new ways to wealth were to be devised. We were to go on, as during the preceding century, to double the standard of living in the next four decades. We disproved for the time being the aphorism that trees do not grow to the sky.

This was accomplished by essentially new methods. Instead of thrusting competitors aside or absorbing them by merger, business leaders divided the business enterprise into its functional units and specialists were put in charge of each of these. To each vice president was said, "There is pay dirt in your function. Go in and extract and refine it." The principal functions thus staked off for intensive cultivation were product engineering, production control, market analysis, sales management, corporate finance, personnel administration, and budgeting. We had tapped new sources of economic strength and were able to climb to new records of industrial accomplishment. In this period, 1900-1935, we maintained the phenomenal rate of progress achieved in the preceding century. This period may be called the period of *Scientific or Specialized Business Leadership.*

Suddenly in the early Thirties the economic machine stalled. Why could we not bring the two great elements—human resources and natural resources—together to produce a continuous high level of employment and production? In the judgment of some skeptics it required another world war to produce the needed impetus.

When orders for munitions and other supplies began to trickle across the Atlantic, the American economic engine began to hit on all eight cylinders. Soon we were in the war ourselves. It was then that we doubled our prewar output. This was due in large measure to the patriotic fervor, moral elation and sense of personal participation that comes from serving a common cause. This brings to mind, somewhat ironically, William James' statement made shortly before World War I:

> "So far, War has been the only force that can discipline a whole community, and until an equivalent discipline is organized, I believe that War must have its way."

UNION EXPANSION

But a significant change had come into the American business life. It is difficult to trace this change to its origins. Along about 1935 the common man decided to join trade unions. Up to that time the trade union movement, which roughly dates back to 1885, had been able to enlist only 3 million workers. These were the aristocrats of our laboring force such as locomotive engineers, firemen, brakemen, conductors, carpenters, bricklayers, and machinists. They were, with few exceptions, skilled craftsmen and artisans. But in 1935 labor leaders set out to organize the rank and file in the mills, mines, and stores of the country, particularly in the mass production industries. Today union membership totals more than 16 million. Thus, in a period of fifteen years there has been a fivefold increase in the number of individuals whose wages and working conditions are set by collective bargaining. It is difficult in this short article to analyze the causes of this phenomenal growth. It was induced in part by World War II, but to a greater extent, in my judgment, it was a result of the search by the average American

working man for what he believes to be social justice.

A careful student of the American economic scene, Sumner Slichter, Lamont Professor of Economics at Harvard University, states that we now have a laboristic economy. I agree with this conclusion. Collective bargaining, which tends more and more to be on an industry-wide basis, seems to be a permanent *sine qua non* in the operation of our free enterprise system. But collective bargaining, particularly negotiations that take the form of tests of power, calls for leadership on both sides that is more socially responsible. In a democracy the ultimate economic problems are moral ones. Their solutions rest basically upon self-discipline. It remains in this survey of the changing nature of business leadership to consider what the developments of these past fifteen years, which constitute what I choose to call the Transition Period of American Business Leadership, mean in terms of managerial objectives at the top level.

LEADERSHIP AND MORALE

The task ahead, in my judgment, is to usher in a period of *Democratic Business Leadership*. There is a sound basis for the hope that we can achieve our goal. Psychologists tell us that intelligence, which may roughly be defined as the capacity to solve problems, is specific and not general. I mean by this that the capacity of a person to solve problems varies from one field to another. One person may be skilled as a merchant, another as a musician, a methematician, or a mechanic, and each may be relatively mediocre in other areas. It is only rarely that Nature produces a person of uniformly high intelligence in many areas. Then a Benjamin Franklin or Thomas Jefferson comes into being. This throws light on the problems of conducting a business enterprise.

Within the business enterprise talents of great worth are hidden in almost every individual. These need only to be evoked to give the individual concerned a sense of belonging, a sense of worth. The recognition on the part of all of us that none can lead in all fields, that all of us can achieve excellence in one or more fields, and each in his own way has a contribution to make to the welfare of the group and therefore to himself, will make for better results in these days of change and constant friction.

There are in the United States approximately 4 million business enterprises. In every one of these enterprises the management and the workers spend the bulk of their useful time. There are 168 hours in the week. I spend one of these in church, probably 40 or 45 at the Bank; possibly another 45 hours are filled with reveries dealing with central banking. It is on the business front that we need to live more creatively, more spiritually. It is on the business front that we find our lives intimately intertwined with our fellow men. It is within the circle of the business enterprise that group behavior needs to be analyzed and enriched. Sociologists, psychologists, and cultural anthropologists have been studying group behavior for a long time. These men seek to understand how in the social organism various parts become or fail to become integrated. They look upon the group—the family, the community, the nation—as a social organism. Each is a living, functioning whole wherein each of the parts has its essential nature, where the whole is more than the sum of the parts. Where unity is achieved, the group functions and grows in a manner which makes for high morale. Where unity exists within the circle of a family or a parish or a business enterprise, the communal life becomes rich and invigorating. The same result can be achieved in a business enterprise.

A direct method of achieving this unity is to treat each person in the group as an individual, recognizing his strengths and limitations, and utilizing his strengths, minimizing his limitations. In our Western Civilization where democracy comes to full flower, we regard the ideal situation as one where authority and responsibility are inseparably blended, where the mutuality of obligation and privilege is recognized and observed. Communal life under such circumstances comes to fruition in such qualities as understanding, loyalty, mutual respect, self-discipline, and the other Christian graces. Surely here is a worthy goal which all Americans attached in any way to the organism we know as business enterprise should seek to attain. Indeed, the absence of these qualities, as revealed by frictions generated by mass movements of the day, spell the decline of the American Business Civilization as we know it today. The group is an organism, a living functioning whole. Furthermore, it can become more than a social or legal organism. In terms of spiritual values it can be dynamically progressive.

ELEMENTS OF "TOP LEADERSHIP"

A word about the so-called *Top Leadership*. Top Leadership probably differs from that of lesser status only in degree. But this degree is important. I like to think of Top Leadership as a blend of four elements: the first is *technical competence*. Present day business management is exceedingly intricate and calls for thorough preparation and constant study. The second is *a broad intellectual outlook*. Outstanding leaders of tomorrow will need to have intellectual interests as far-reaching as world history, foreign relations, psychiatry, and sociology. This wide range of interest broadens one's values, softens one's prejudices and reforms one's values. The third element might be called *social intelligence*. This refers to the capacity to understand the motivation of the individual and the way he behaves in groups. If we attack this problem with the same vigor and pioneering spirit that has characterized our national life hitherto, we shall be able to blend our treatment of man as an individual and man as a member of a group.

The last element is *personal integrity* in the sense of intellectual honesty plus a well-defined set of moral and spiritual values. Think of the transition in human relations that would occur if on this coming Monday morning there would spring into being in each of the 4 million business enterprises of this country a type of relationship in which we would respect the other person with the same mutual responsibility and forbearance that exists, for example, in a gracious family.

John Donne, the English poet and divine, has expressed the thought in the following lines:

> "No man is an island entire of itself. Every man is a piece of the continent, a part of the main. If a clod be washed away by the sea, Europe is the less, as well as if a promontory, as well as if a manor of thy friends or of thy own. Any man's death diminishes me, because I am involved in mankind, and therefore never send to know for whom the bell tolls. It tolls for thee."

Basic Principles for Effective Communications

By IVAN L. WILLIS

Vice President, Industrial Relations,
International Harvester Company

Keeping 90,000 employees and 8,500 members of management well informed is no small task. Mr. Willis describes the background and function of a thoroughly planned program.

IN a little factory, the exchange of information between the working force and the ultimate boss is, or should be, as normal as breathing. Nothing is required except a candid attitude.

But in a company like ours, with more than 90,000 employes, the president and the other officers cannot get around to talk with employes or even with all members of management at any frequent interval. Even the works manager of a factory with, say, 3,500 employes is chained to his desk and telephone to a large extent. So we have to find some artificial method for giving information.

Our Employe Information Program is designed for factory employes, and is carried on at the local factory level. It is the most important part of our information work but it is not the only part. In addition to the factory program of news-letters, bulletins and letters which will be described, we publish one general employe magazine of the picture type. In addition to local letters and newsletters, we issue letters to all employes from the General Office, usually from our president, John L. McCaffrey. In addition to local news-letters, we issue a general managerial news-letter from Chicago which goes to all the 8,500 members of our management in the United States.

The impetus for our Program came from Mr. McCaffrey. The chairman of the committee charged with developing a program was our senior executive vice president. Before the Program went into operation, it was reviewed with and approved by a special meeting of the company's officers and the general managers of all the operating divisions.

The program exists for two reasons. One is the general reason already given: our business is so large that we cannot rely on natural channels for the dissemination of information. The second reason is quite different. Briefly, it is this: both opinion sampling studies and practical observation had indicated that there existed a great gulf between shop thinking and front office thinking, not only in our company but in industry generally. We are trying to bridge that gap.

Basically we make two assumptions. One is that the average man, including the average factory worker, is a remarkably fair-minded person. He is perfectly willing to listen to both sides of a question, and this includes labor relations questions in which his union may be on one side and his management on the other. Secondly, the average man is a very intelligent man, up to the limits of his factual knowledge. Given adequate facts, he has a strong instinct for the truth.

So our answer to the problem of closing the gap between front office thinking and shop thinking has been to give facts. We want to give our people more facts, more frequent facts, franker facts, speedier facts. We want them to know our day to day problems. We want them to know what we are doing, and why we are doing that instead of something else, and how it will affect them.

BASIC MEDIA

We have set up three media of communication with factory employes.

First is a weekly news-letter, produced at the factory and similar in general format to the Kiplinger Letter or other familiar news-letters. It is distributed to all members of the managerial group in the plant, both in the shop and in the office. The news-letter, although addressed to management, is not confidential and it is not only permissible but it is expected that every supervisor by one means or another, will pass on to his employes information from the weekly news-letter.

Second is what we call a managerial bulletin. It is analogous to a newspaper "extra." It is intended to be a rumor-killer, to beat the grapevine when possible. It appears at no regular interval. In time of crisis, there might be several in a day. There might not be another bulletin for several weeks. The objective is to cover fast-breaking news in such a way as to get the story to managerial people before the end of the shift.

Third is the letter from the works manager to the homes of all employes. Like the bulletin, such letters appear at no regular intervals. They may deal with non-controversial topics. They may deal with the hottest of controversial topics. They are used whenever it is important that all employes be told the same facts in the same way at the same time, and particularly when it is desirable that not only the employe but his wife or other members of his family have the facts also. The letter to all employes can be distinguished from the rest of the program in another respect. Whereas the weekly news-letter and the managerial bulletin are purely factual reporting, the letter to all employes is used not only to report facts but also to argue for a point of view. It often seeks to persuade as well as to inform.

Describing the tools we use raises the natural question: Why these particular techniques? Why don't we send

all letters directly to employes, or do the whole job from the General Office, or establish plant newspapers on a weekly basis, or any of the many other possible techniques?

One reason is that we had had some years of experience with our general managerial news-letter out of Chicago. We knew it was effective. We felt we knew how to operate a news-letter program. The second and greater reason was this:

While we believe political and other causes were important in creating the gap between front office and shop thinking, we believe the greatest cause was the destruction of the close relationship that once existed between a foreman and his men. The Wagner Act was largely responsible for that. Under the restrictions of that Act, it was feared that foremen would say the wrong thing and attract unfair labor practice charges. Foremen "clammed up", except for specific working instructions. Many personal relationships suffered as a result. A gap was created which not only lowered the prestige of foremen in employes' eyes but in many cases lowered their prestige in their own eyes also.

GOALS FOR EMPLOYES AND MANAGEMENT

So our program was designed with two objectives:

1. To Give Information to Employes
   a. To increase their understanding of business in general and our business in particular.
   b. To let them see that management always has their interests in mind in making business decisions.
   c. To provide a prompt and accurate rival for the plant grapevine.
   d. To provide prompt and accurate information on matters which are likely to be distorted if left to union publications to report.
2. To Give Information to Plant Management
   a. To establish more frequent contact between the foreman and the top management of his plant.
   b. To inform the foreman of the affairs of his own department and of the plant as a whole.
   c. Most importantly, to try to increase the prestige of the foreman and rebuild his contacts with employes by making him the natural source of employe information on most company matters and by putting him in the position of the "man who knows what's going on."
   d. To provide a prompt means of communication which would assist all line and staff groups in the plant.

So we devised media to make foremen an active part of the program, to make the top plant management active in the program and to bring not only the employe but, to some extent, his family within the scope of the program.

Two kinds of people administer the Information Program. In factories where there is a works public relations manager, the Information Program is one of his main responsibilities. We have now eleven works public relations managers. In the other operations, the program is carried on by an information editor, who devotes full time to it, except in a few of the smallest operations. There are presently nine information editors.

Most but not all of these people have editorial training or experience. One of our public relations managers is a mechanical engineer. Another is an ordained minister. But our general experience emphasizes that it is easier, cheaper and quicker to hire an editor and teach him about Harvester than it is to take a veteran Harvester man and try to convert him into an editor.

Long company service is not necessary. Learning quickly about unfamiliar things is the business of a reporter or editor. It is what he is trained to do. A young man with that training, given the free run of a plant will astonish everyone by how rapidly he learns company policy and company problems.

A new information editor is hired as a non-managerial employe, a purely temporary status, since we obviously cannot expect a non-managerial employe to be management's spokesman to employes and other members of management. The new information editor is usually assigned to the industrial relations staff, so that he gets a quick and thorough training on industrial relations policies and philosophy. After his training period, usually a matter of two to five months, when he is placed on the managerial roll he usually reports directly to the works manager. All public relations managers, of course, are staff executives reporting directly to the works manager.

The problems of clearance have been minimized. A non-managerial information editor must clear his weekly newsletter not only with the works manager and works industrial relations manager but also, by telephone, with the General Office public relations group. Once he is confirmed and placed in management, this is no longer required. In all cases, any letter to the homes of all employes must be cleared with the General Office public relations group. With that one exception, the works manager and his public relations manager or information editor are free to conduct their local program as they see fit, within the general limits of policy.

INFORMATION AND BARGAINING

The relationship of the Program to collective bargaining is naturally an important one. The point should be made plain. We are not trying to short-circuit collective bargaining nor to destroy unions. We are trying to describe our own actions and thoughts accurately and temperately. Our objective is not to misrepresent unions but to represent ourselves properly. We are not anti-union.

On the other hand, we are all finished with the idea of letting unions tell our story to our people. We are going to do that for ourselves and we are going to do it in competition with a union or any other agency which attempts to do it. We compete with union publications, especially on the matters of speed and accuracy. We want the first punch. We want to be first with the straight news. When the correct facts are made public promptly, it is hard for anyone to distort them later.

We recognize the rights of a union as the employes' spokesman, their lawyer if you like, on certain specific topics. But we do not consider employes the union's employes. They are our employes. We are attempting to establish a relationship directly with our people so that regardless of what union they belong to, regardless of changes in union officials or union affiliation, our story will reach our people consistently and continuously.

We are committed to a policy of

frankness. This is a program in which we have to take the bitter with the sweet, because it is a *news* program and news is what it is, and not what we might wish it were.

Our management, like every management, is not perfect. We do make mistakes. And we cannot run a news program by pretending that that is not so. It is, of course, very easy to control what is printed. But it is not at all easy to control what the employe believes. The only way we can be believed is to tell the truth, even when it hurts a little. We would rather have red faces sometimes and have our people believe us than to try to pretend that we are perfect and have them discount everything we say.

So, if we report this week on an arbitration case the company won, we have the same obligation to report next week on one the union may win. If we report our increased employment as a result of new capital investment, we are equally bound to report a lay-off as soon as we see it coming. If we report on the greatly increased earnings of factory employes, we are equally obligated to report an increase in dividends to stockholders. The test is not whether the news is flattering to management or calculated to make employes applaud. The test is whether a particular bit of information is true and important to our business.

We believe understanding and good relations come from having everyone well informed all the time. In collective bargaining we do not wait until an agreement has been reached before we tell employes the story. Our information starts when the bargaining starts and proceeds on a daily basis. Changes in the union's position or in the management's position are reported. Then, if we reach a period of crisis, everyone knows the story. We don't have to go back and record the history of two months of negotiations before employes can understand what may happen tomorrow.

SPEED IN A CRISIS

A number of international unions have locals in more than one of our plants. Ordinarily major questions involving these unions are handled in central negotiations. On such occasions, we provide a daily bulletin service to every management man in every plant concerned. From time to time we send a letter to all affected employes, to summarize the proceedings or point up a particular issue. If a crisis stage is reached, our daily coverage may be widened out to include every management man in every Harvester plant, since a strike would probably have effects on all.

The Information Program, of course, is not concerned only with labor relations problems. The news-letters and local letters discuss anything which is news and is important to employes, from plant alterations, to production records, shifts in production schedules, the supply of materials, the customer acceptance of products, etc.

One of our check studies will show what employes themselves thought they were getting from the program. Answers add up to more than 100% because of multiple response.

Status of company; way profits are distributed	42%
Production; new products	30
Prices; price changes	27
Employe benefits; labor relations; wages	20
Operation of plant; general information	14
Future plans; business outlook	12
Raw material problems	9
Company policies; changes	5
Miscellaneous	19

When employes were asked in that same study whether they thought they got inside information or just routine stuff, 64% said they believed they did get inside information. When they were asked whether they believed what we told them, 70% said they believed most of it; 24% said some of it and only 1% said they believed practically none.

As to readership, there is no question. Every study shows a high level. The range is roughly from a low of 75% to a high of about 95%. In all cases, a substantial percentage of employes' families also read letters sent to their homes. Local letters are read more closely than those which come from the General Office. It is plain that the old Denver Post slogan about local news still applies —"A dog fight in Champa Street is worth more than a war in Europe."

It is also evident that what we call the "you" angle is very potent. As an example, some months ago our president sent a letter to all factory employes, describing three things the company was doing to make jobs steadier. In a study of two plants, no employe was able to recall all three things correctly, when examined several weeks later. About 8% could name two correctly and about 24% could name one correctly. But when they were asked, "What did Mr. McCaffrey say *you* could do to help?"—the proportion of correct answers immediately shot up beyond 50%.

Our experience in the four and one-half years our program has been in operation leads us to several generalizations which may be of interest:

1. Success in a particular plant is in direct ratio to the interest shown by the works manager.

2. Properly administered, the program can and does have very considerable effects upon employe attitudes and union attitudes.

3. Candor is essential.

4. Generalities are valueless. Employes live in a world of precise measurements. They expect other information to be just as specific as the weight of a piece of stock or the speeds and feeds of a machine.

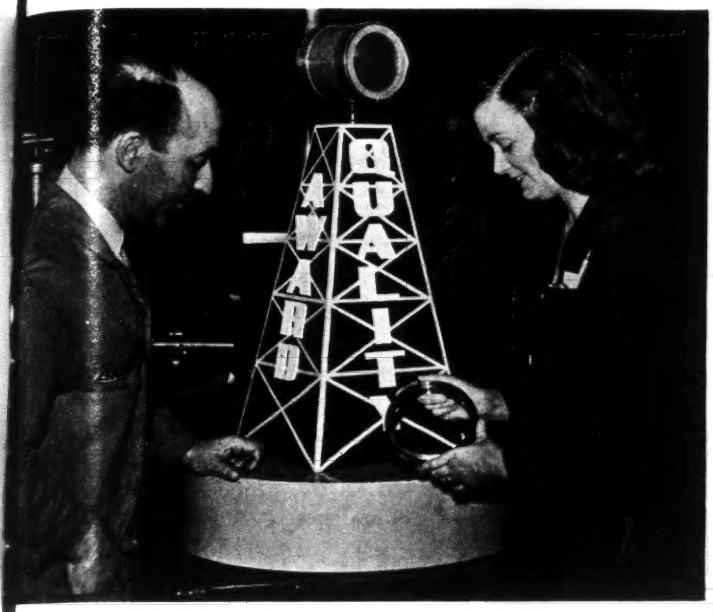
5. Speed and timing are vital, usually much more important than precise language or pretty printing.

6. Employes do welcome and will absorb information about their company both non-controversial and controversial.

7. Brevity is a fetish of business executives and not of employes. The right length for a communication depends on two things: adequate presentation of the facts, and employe interest. Some two-paragraph letters are flops. Some four-page letters are great successes.

8. Foremen, busy though they are, will find time to do their part in such a program, once they are persuaded that it is good for them. Two years ago, perhaps 25% of foremen said they would like to be relieved of the burden of passing news on to employes from the news-letters. Today, fewer than 1% tell us that.

The Employe Information Program is far from perfection. Much remains to be done to make it work better. But we do see results and we do have faith that if we tell employes promptly, and tell them right, and tell them often enough, there will be better understanding and better cooperation and better results for everyone connected with our business.



. "Inter-departmental competition was the driving force of e campaign." Foreman and employee with trophy awarded department making best showing.

Selling Quality Improvement to Employees

By C. S. GOTWALS

Quality Manager, SKF Industries, Inc.

A comprehensive campaign that succeeded in making supervision and employees "quality conscious". Specific goals for improvement and inter-departmental competition provided the stimuli to keep interest alive for a six month drive.

AT no time in business history has quality been more important than it is today. Customers have become increasingly critical of the products they buy. As a result, they are constantly tightening their standards, and those of manufacturers as well, in an effort to gain or hold a competitive advantage.

Quality, however, isn't something easy to attain. It must be vigilantly pursued because of the many variables—differences in raw materials, in worker skill, in machines, for example—that make perfection impossible.

Like most other businesses, SKF was confronted with the postwar problem of improving product quality while cutting manufacturing costs. Statistical Quality Control was an important part of the Company's operations, proving particularly valuable during the war. We realized that if we were to continue to hold the customers we had, and gain new ones, our employees, and especially those in the factory organization, needed to become "quality conscious."

With this thought in mind, SKF developed a *Quality Improvement Campaign.* Its principal objective was to acquaint every member of the factory organization with the continuing need for producing high quality ball and roller bearings. We planned to accomplish this in two ways: (1) Stricter adherence to exacting engineering specifications and (2) Reduction in the amount of rejected and re-operated work. The campaign opened November 1, 1949 and ran for six months.

PREPARING SUPERVISORS

Once it was determined how the campaign was to be conducted we set out to enlist the cooperation of all factory personnel. In our Company, supervisors —the foremen and superintendents— know they are management's representatives on the factory floor. How well the campaign fared would depend to a great extent on their support. A month before the opening date, supervisors were told of management's plans and, at a dinner meeting away from the plant, they were given full details. Top management spoke of quality improvement in terms of orders and jobs. Quality, the supervisors were told, is the Company's most valuable asset and therefore everyone's concern. The Vice President in Charge of Sales related instances of justified customer complaints and supported these with concrete examples. A first-hand account of how a similar campaign was conducted and what it accomplished was related by the Quality Control Director of a large electrical manufacturing firm. Our supervisors were then briefed on the plans we had developed.

STIMULATING EMPLOYEE INTEREST

Meanwhile, bulletin boards on which the progress of the campaign was to be charted were installed in the plants. Until the opening of the campaign, these boards carried "teaser" announcements, serving to heighten worker interest. About a week before the official opening, a letter from the President, outlining the campaign's objectives and importance, was mailed to all wage employees at their homes. It detailed the WHY of the campaign, pointing out that quality is a personal matter to be achieved only by putting one's best effort into a job.

On the opening day of the campaign, a special 8-page edition of THE SPHERE, the employee publication, was distributed to workers. This "Quality Extra" was significant in several ways. It not only served as a vehicle for getting the campaign under way, but it announced a Quality Slogan Contest and, more important, informed employees of the support given by the United Steelworkers (CIO), bargaining agency for hourly-paid workers in our Philadelphia plants. Messages of the Union leaders— the president of the local Union, the

District staff representative, and the District director — were prominently featured. Here are some excerpts:

"We feel that, as responsible leaders of our Union, we have a large stake in the ability of the Company to provide our members with continued employment."

"Remember, the difference between the SKF product and the competitor's product is YOU . . ."

"Full cooperation will reassure us of a permanent place on the market as long as we continue to turn out high quality bearings."

MANAGEMENT-UNION QUALITY COMMITTEE

This cooperation was particularly valuable and extended to a joint management-union committee on quality whose purpose was to bring to the attention of supervision any problem relating to quality. Of equal representation, the committee met weekly with quality supervisors and monthly with the Quality Manager. This committee operated only in the Philadelphia plants since the amount and type of work made these locations the focal point of most quality problems.

In addition to the statements of the Union leaders, the special edition of THE SPHERE carried editorials by the President and Quality Manager, announced contests for stimulating the campaign, and told how quality improvement would be judged.

SLOGAN CONTEST

The slogan contest exceeded expectations. It was open to all employees in all plants. For the best slogan of 10 words or less, a cash prize of $50 was awarded while prizes of $25 each were given for the best slogans in each of the other four plants. More than 1,500 entries were submitted. The winning slogan, "Quality Depends On Me," was made the theme of the campaign and used extensively — on decalcomanias that appeared on doors, hand trucks, fork lift trucks, tote pans, machines and work benches. Shop caps with the slogan imprinted made a big hit. Book matches also were distributed carrying the winning slogan. Another means of stimulating worker interest was awards for suggestions, through the Employee Suggestion System, on how to better quality.

COMPETITION BETWEEN DEPARTMENTS

Inter-departmental competition was the driving force of the campaign, but on what basis this was to be judged presented somewhat of a problem. It was finally decided that the percentage of operational losses (scrap and rework) against total production would be the criterion. To make this plan workable, an 8-month period in 1949 was selected as a base. Each month figures were posted in the various productive departments so that employees could tell at a glance how they fared in competition with others. The department showing the most improvement was awarded an "Oscar"—a 3-foot pylon with a revolving beacon—which was to be held for the following month. Along with the "Oscar" went a valuable prize which was awarded by lot to a department employee. Names of all workers were placed in a hat and the drawing made by a Union representative of the joint quality committee. The award the first month was a camera with color film, screen and slide projector. Another month the prize was a complete trout fishing outfit. In addition each employee in the winning department was given a Certificate of Merit signed by the Quality Manager and the Factory Manager.

At the same time, large outdoor signs, well lighted so they were visible at night, were installed at all plant entrances. Hand-painted, they depicted an air race with an airplane for each productive department. The position in the race of the planes, each of which was numbered to correspond to the respective plant department, represented the competitive standing.

At the halfway point, and at the close, of the campaign, employees received letters from the President informing them of the progress that had been made and thanking them for their support. The letters served to give workers a feeling of being in management's confidence.

AWARENESS OF GOALS

All in all, the campaign proved a worthwhile contribution to our efforts to improve quality and lower scrap and re-operation costs. Interest has been kept alive by having each department work toward a specific monthly goal. If given a definite mark at which to shoot, workers usually strive to reach or better it. More now than ever, our employees are aware of the constant need for maintaining high quality standards so that our customers get the kind of bearings they want and have a right to expect.

Outdoor billboards at plant entrances dramatized competitive standings. Slogan, best of 1,500 submitted, won $50.00 prize.

Current Trends in Negotiated Pension Plans

By ARNOLD W. FRUTKIN
The Bureau of National Affairs, Inc.

Has the demand for pensions reached its peak? What effect will a wage freeze have on pensions and other non-monetary benefits? A concise review of trends and their significance.

A YEAR ago, CIO's Steelworkers were making their fight for negotiated pension plans in the steel industry. Since then, pension coverage has been expanded by possibly two million workers, and contractual retirement plans have become entrenched in steel, rubber, auto, glass and other industrial areas.

Can it be expected that this pension tide will roll on undiminished, or has it already reached a high point? What types of plans may be expected in future negotiations? An exhaustive analysis of wage and pension settlements over the past year sheds some light on both these questions.

THE QUANTITATIVE TREND

Figures based on nearly four thousand wage settlements reported annually, show that well under two percent of union wage settlements involved pension plans during the first half of 1949. In the third quarter of '49 this figure rose almost to five percent. And in the final quarter of the year, after issuance of the Steel Board's report in September, the frequency of pension settlements doubled again, coming close to ten percent. A high of eleven percent was reached in the first quarter of 1950.

The first drop in the frequency of negotiated pension plans took place in the second quarter of 1950. It was an appreciable drop; pensions fell off to about seven percent of reported settlements. This is the last quarter for which final data are available. However, it is too soon to conclude that the pension tide has begun receding. (Fragmentary data covering the beginning of the third quarter indicate the possibility of a return to higher levels.) But certainly there has been an interruption of steady progress and a possible loss of momentum.

Apart from this statistical data, there are other factors in the picture, some indicating a decline, others a possible increase, in the number of new pension plans that may be expected in coming months.

A sharp distinction may be drawn between large and small companies in estimating union pension prospects. The first year of pension negotiations has been characterized to a substantial degree by settlements with relatively large firms best able to shoulder long-term commitments. Exceptions may be found in apparel and retail-wholesale trade in the New York City area and among the smaller steel fabricators, many of whom signed sketchy pension memoranda to escape the Steelworkers' strike last Fall against major producers. Few of these fabricators, however, have as yet reported converting such memoranda into full blown pension plans.

In other words, there has been no great success so far in signing small companies to pension plans. Unless this picture changes, there remain definite limits to the spread of negotiated pensions. And it may be said, in this connection, that there has been little success on the part of unions in persuading small firms to enter into area-wide plans so as to share the risks involved.

A second factor pointing to possible decline in the frequency of pension settlements is general coolness on the part of the AFL to private retirement plans. The CIO has already exploited a large portion of its potential in this field. AFL unions, representing in general smaller, more scattered and diverse bargaining units than CIO unions, have not pushed pension plans greatly. And some unions outside the CIO, including AFL's Electrical Workers and the Independent Machinists, have taken positive stands against private pensions. They look to the federal government to step up retirement benefits to take care of their relatively high-paid workers. So it is unlikely that these unions will do much to keep pension frequency up.

The current increase in cost of living may be expected to divert union attention from nonmonetary benefits, such as pensions, to cash increases. Some evidence that this is happening is found in a considerable decline in the frequency of "zero" wage settlements. (These have dropped by half in the last couple of months.) The ever-present possibility that wage controls may be imposed along with other wartime regulations inspires unions to act now on wage gains — before ceilings are imposed.

The current pressure upon real wages probably lies at the root of relatively unprecedented actions taken by rank-and-file unionists recently in voting to reject wage settlements heavily weighted with non-monetary benefits. Such failure to ratify agreements has been reported in plants of the Hudson Motor Company, Bendix Aviation, and Doehler-Jarvis, among others.

Because of the recent dramatic emphasis on wage bargaining, the impression has grown that unions are emphasizing wages to the *exclusion* of

pensions. In part, this appears to result from the fact that wage demands made at Ford and the major rubber companies did not include pension requests. Of course, the simple fact here is that pensions have already been negotiated in these instances. Pensions seem to have been reduced to the status of a part, rather than the whole, of union bargaining objectives. Large wage demands have been thrown into the hopper along with pensions but have not actually replaced them. See, for example, negotiations and settlements at Hudson, Armstrong Cork, Packard, Dana Corporation and leading cement producers.

In the long run, however, a wage freeze may bring renewed interest, on the part of both labor and management, in pensions and other nonmonetary benefits. Such interest arose during World War II, under favorable tax provisions, sparked by the need to attract or retain manpower by means other than wage increases.

SUBSTANTIVE TRENDS

There have been many changes in the so-called pension "pattern" in the year since the first major plan was negotiated at the Ford Motor Company by CIO's Auto Workers. By and large, the changes have been in the direction of improvements from the employee's point of view. Here are some of the major changes as evidenced in contracts signed in recent months.

Effect of Increase in Social Security: Under the Ford and Big Steel agreements, the employer gets the full benefit of any increase in Social Security primary benefits. These contracts provide pensions of specified amounts, including Social Security, and the employer's obligation is limited to making up the difference between the employee's primary benefit under Social Security and the monthly pension he is guaranteed by contract.

Under more recent plans, the employee stands to gain from an increase in primary Social Security benefits. This has been made possible in any of several ways:

(1) Under Studebaker and General Motors agreements with UAW-CIO, the pension fund is committed to pay *at least* a specified minimum monthly amount toward employee pensions. This means that increased Social Security benefits could not reduce payments from the fund to zero as will happen in many cases under older plans. Instead, Social Security benefits would always be supplemented to some extent by payments from the private fund.

(2) Under the Trailmobile type of plan, one half of any increase in Social Security primary benefits is to be added to minimum retirement incomes guaranteed for various levels of service. Lee Tire & Rubber has shaped a similar provision with CIO's Rubber Workers. Goodyear and General Tire have agreed to add half of the increase to retirement incomes determined by formula, but they don't add to minimum guarantees.

Maximum Retirement Income: A maximum retirement income of $100 per month was set by the Ford plan and has since been duplicated in other plans, notably in automobiles and farm equipment. The earnings formula used throughout the steel industry has no such ceiling, but the minimum normal pension of $100 a month is likely to be the maximum for the average wage earner in the industry. But more recently, a number of plans have brought the possibility of higher incomes within reach. The fixed minimum payment of $1.50 per month guaranteed by GM for each year of service, regardless of Social Security income levels, is one way this has been done. (Based on new legislation, this plan would raise the maximum income after 25 years to $117.50 per month.)

Another method for making possible retirement incomes greater than $100 a month has appeared in plans negotiated with Kaiser-Frazer, Square D, Electric Auto-Lite and other companies. While these plans provide the usual $100 after 25 years, they permit further accumulation of pension credits after 25 years, generally until 35 years of service have been completed. Monthly income potential at that time is $125.

Pro-rata Retirement Incomes: Under the first plans negotiated last year, provision was generally made to pay employees retiring at age 65 "pro-rata" benefits where their service added up to less than the 25 or 30 years required for full benefits. Thus, employees retiring at 65 with minimum service credits of 15 years could get 15/25 of $100 (or 15/25 of some figure based upon an earnings formula). Since the figure used included Social Security, the employee was in effect having his independent Social Security receipts pro-rated.

More recent agreements pro-rate in a different way, more favorable to the employee. Such agreements apply the appropriate fraction of normal service, 15/25, for example, to the amount of money that would come to the employee at normal retirement *from the private pension fund*. Then, the full amount of his Social Security, not a pro-rated portion of it, is added in to yield the final figure.

Examples of this method of pro-rating appear in plans negotiated by Automotive Tool & Die Manufacturers (Detroit), International Harvester and Trailmobile—all with UAW-CIO, and in plans signed by Lee Tire & Rubber and Philco.

Management's Total Pension Costs: While there has been a trend, as indicated in the preceding paragraphs, toward the liberalization of pension incomes, a number of plans show a corresponding trend toward controlling management's *total* outlay for pensions. Total costs include (1) the cost of the private plan, and (2) the taxes upon management for Social Security retirement purposes.

It was recognized by some negotiators that increases in Social Security benefits would involve increased taxes upon the employer. Even where there was no objection to allowing the benefit of such an increase to go to the employee, some companies sought to keep their total costs fixed. Examples of plans that place some ceiling on total pension costs, including direct costs and Social Security taxes, include Philco's (CIO's Electrical Workers), and Trailmobile's (UAW-CIO).

BASIC NORMS

Apart from these trends the general outline of negotiated pension planning has remained substantially as it was when the Ford and Steel programs were drawn up. By and large, current plans do not vary significantly from these norms: (1) noncontributory, (2) normal retirement at 65, (3) normal service requirement of 25 years, (4) no compulsory retirement, normal pension of about $100 a month after 25 years service, (5) some disability retirement provision—usually requiring considerable service and (6) an age level not more than 10 or 15 years below normal retirement age.

Industrial Application of the Ratio-Delay Method

Part II*

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A factual analysis of the "Ratio-Delay" technique in actual practice. New light on an important application of a basic theory. Of special interest to management men faced with problems related to expanding production schedules.

Personal allowance may be calculated by the same method as the delay allowance, but in most cases it is not necessary to compute a personal allowance for each operator. Since personal time depends to a large extent upon the individual operator, an average of a large number of operators should be taken. The average departmental or factory personal allowance is probably a more significant figure.

In a case where a certain period has been set aside for a lunch or rest period, special calculations must be used since no observations are recorded during this period.

An example of a personal allowance calculation, including a fifteen minute rest period, is given in Example No. 2, shown below.

EVALUATING RATIO-DELAY

Before any sampling technique such as Ratio-Delay may be accepted, it must be tested for validity and reliability.

"The validity of a test may be defined as the accuracy with which it measures that which it is intended to measure." [6] The validity may be tested by comparison with some other independent measurement or criterion. One possible method of checking the validity of the Ratio-Delay method is by comparison with stopwatch time studies.

Another "important characteristic of any test, a characteristic which is essential to, but not a guarantee of validity, is self-consistency or reliability of measurement." [7] The reliability may be evaluated by comparison of two or more Ratio-Delay studies taken on the same subject under similar conditions. If the results agree closely, the coefficient of reliability is high.

So that sufficient evidence regarding the reliability and validity of the Ratio-Delay method could be compiled, several industrial studies were made. These studies and their results are briefly outlined in the following material.

[6] Lindquist, E. F., *A First Course in Statistics*, p. 213.

*Part I.—August 1950, ADVANCED MANAGEMENT.

[7] Ibid., p. 215.

Example No. 2:

Assume: (Results of Ratio-Delay study for one department)
Total of all productive observations (P) = 2940
Total of all personal observations (Per) = 60
Total of all observations (N) = 3000

Rest period = 15 minutes per 480 minute-day
Number of personal delay observations in 465 minute-day = 60

$$\% \text{ Personal delay in a 465 minute-day} = \frac{\text{Per}}{\text{P}} = \frac{60}{2940} = 2.04\%$$

$$\text{Rest period} = \frac{15 \text{ minutes}}{480 - 15 \text{ minutes}} = 3.22\%$$

Total Personal Allowance = 3.22% + 2.04% = 5.26%

The limits of accuracy for the personal allowance may be determined in a manner similar to the method outlined previously for delay allowances.

STUDY #1: A DELAY ALLOWANCE STUDY OF COMMON MACHINE SHOP OPERATIONS

The purpose of this study was to determine personal and delay allowances for common machine shop operations.

This machine shop department consisted of sixty-four machines and forty operators. The machines were of fifteen different classes common to most machine shops. All employees who worked with these machines were paid on an incentive basis.

Observations were taken at random during a period of eleven days and a sufficient number of observations were obtained on five operations to draw conclusive results concerning allowances. These operations were single turret lathes, ordinary single drills, ordinary gang drills, gang turret lathes, and single speed drills. Observations were also recorded on other miscellaneous operations in the same department.

The first step in this study consisted of securing the cooperation of the de-

partmental foreman. Since the shop was unionized, the union stewards were told the purpose and nature of the study. Through these means, the employees were informed of the observer's actions.

A data sheet was constructed which listed each of the fifteen various operations. A job interruption key was also made for use in keying the causes of delay.

Job Interruption Key:

Key No. Description of Interruption

1. Talk about job to foreman, clerks, truckers, or supervisors
2. Get started—prepare and arrange work area, start machines or equipment
3. Change jobs — get and aside supplies, tools, prints, and other equipment
4. Secure inspector's approval
5. Check work—measurement or gauging of work
6. Sort, count, arrange or record material, production, or scrap
7. Load or move material on trucks
8. Clean equipment or work area —remove chips and shavings, wait for cleanup man
9. Minor mechanical or electrical difficulties
10. Maintain process — adjust equipment, sharpen tools, change broaches
11. Oil machines or equipment— get oil, oil machine, aside oil
12. Minor repair of tools, machines, or equipment
13. Alignment of jigs, fixtures, gages, stops
14. Wait for tools, trucks, stock, foreman or supplies
15. Add coolant or processing materials
16. Help another worker
17. Shut down at end of shift— aside equipment or cleanup of workplace, make out timeslip
18. Miscellaneous
    - Open and close windows
    - Turn lights on or off
    - Clean right-of-way
19. Personal—Lunch periods, get drink, smoke, washroom, and other personal needs
20. Avoidable delay—Arrive late, leave early, idle

The procedure followed in taking this study was similar to the one previously outlined.

Results and conclusions of Study #1 are included in Study #2 for purposes of comparison.

STUDY #2: A DELAY ALLOWANCE STUDY OF COMMON MACHINE SHOP OPERATIONS

The purpose of this study was to determine the reliability of the Ratio-Delay method by comparison of the results of Study #1 with Study #2.

Both of these studies were taken in the same machine shop, covering the same operations under similar conditions. These studies were taken one month apart. Production records were checked as a measure of assurance that the conditions were similar. The procedure followed was the same as was employed in Study #1. The composite results of the two studies made it possible to obtain delay allowance percentages on eight different operations.

A comparison of results of Study #1 and Study #2, for the purpose of determining reliability, is shown in Table I below.

The Delay Analysis Summary* is the tool for use in improving methods and eliminating delays. This summary shows the frequency with which the individual delays occur. For example:

*See Table II, page 17.

In Studies #1 and #2, the largest delay occurrence was Key #14—Wait for tools, truck, stock, foreman, or supplies. Thus, to improve departmental efficiency and decrease delays better methods might be employed in routing, scheduling, and trucking. The next most frequent delay was Key #8 — Clean equipment or work area. This delay might be decreased by use of a clean-up crew.

RELIABILITY AND ECONOMY

The conclusions based upon the results of Studies #1 and #2 are briefly as follows. The obtained point difference between the average departmental delay allowances was 0.6%, and the point difference between average departmental personal allowances was 0.4%. The maximum difference of any one operation was 1.2%. Differences as small as these may certainly be attributed to chance variations in delay occurrence. Thus, these studies indicate a reliability of measurement by the Ratio-Delay method.

In addition to evidencing reliability, the Ratio-Delay method also showed a great economy of time consumed in obtaining the results.

It took approximately thirty-four hours to obtain results for these two studies. Eight hours in addition were

TABLE I

		Study #1	Study #2
Average Departmental Delay Allowance	=	7.3%	7.9%
Average Departmental Personal Allowance	=	4.1%	4.5%
Total Allowance		11.4%	12.4%

(Above figures are based on results of a total of 7380 observations)

A comparison of results of individual operations shows:

Operation	Study #1 Delay Allowance	Study #2 Delay Allowance	Composite Delay Allowance
Turret Lathe (Single)	8.3%	8.4%	8.4%
Single Drill (Ordinary)	10.2	9.0	9.5
Gang Drill (Ordinary)	5.8	5.7	5.7
Drill and Tap (Single Drill)	——	6.6	8.5
Single Speed Drill	4.4	——	7.6
Turret Lathe (Gang)	4.2	——	5.6
Bore and Ream (Single Drill)	——	7.9	7.1
Milling Machine	——	——	5.0

The blank spaces indicate operations on which insufficient observations were recorded to obtain results within the desired limits of accuracy for each of the studies. When the number of observations from each study was totaled, the composite gave a sufficient number for accurate results.

spent in computing the results. This made a total of forty-two hours spent in covering eight operations by Ratio-Delay.

Assuming that it is only necessary to take one eight-hour production timestudy of each operation to obtain reliable values, it would take eight hours to study one operation, plus about two hours to compute the results, or a total of ten hours per operation. This assumption is a bare minimum and more than one eight-hour timestudy should probably be taken for accurate results.

It took only forty-two hours to obtain allowances for eight operations by the Ratio-Delay method. In comparison, it would take an estimated eight times ten hours or eighty hours to obtain allowances for eight operations by timestudy. The Ratio-Delay method took only one-half the time that it is estimated would be necessary by timestudy. Thus, the economy of the method is clearly demonstrated.

STUDY #3: A DELAY ALLOWANCE STUDY OF BENCH AND MACHINE COREMAKING OPERATIONS

A further industrial plant study of the reliability and validity of this technique was made covering bench and machine coremaking operations. Comparisons were obtained between studies taken by the Ratio-Delay method and those of stop-watch timestudy when both methods were used simultaneously on the same operations.

As a measure of reliability, comparison was made between results of two independent Ratio-Delay studies taken on successive days. A comparison of the results of both of these studies with timestudy was also made as a check on validity.

The resulting comparisons are shown in the following material.

TABLE II

DELAY ANALYSIS SUMMARY:

Key No.	Description of Interruption	No. of Delays	% of Total Delay
14	Wait for tools, truck, stock, foreman or supplies	101	19.6%
8	Clean equipment work area	90	17.5
17	Shut down at end of shift	76	14.8
2	Get started	72	14.0
1	Talk about job to foreman, clerks, truckers, or supervisors	38	7.3
10	Maintain process	36	7.0
4	Secure inspector's approval	33	6.4
15	Add coolant or processing material	24	4.7
12	Minor repair of tools, machines or equipment	14	2.7
17	Make out timeslip or production record	7	1.4
16	Help another worker	6	1.2
11	Oil machines or equipment	5	1.0
3	Change jobs	4	0.8
9	Minor mechanical or electrical difficulties	4	0.8
10	Miscellaneous	4	0.8
	Total	514	100.0

From these comparisons the Ratio-Delay method evidences both reliability and validity of measurement.

GENERAL CONCLUSIONS

As a result of this investigation, and others made by the writers, using the Ratio-Delay method, the following conclusions seem to be evident.

The proper use of the Ratio-Delay method will result in reliable and valid allowances, in an economical manner, for common industrial operations.

Certain advantages appeared in the use of the Ratio-Delay method over all-day production time studies.

(1) Less time is consumed in determining the allowances, especially where there are many similar operations so that several observations may be obtained each round. The estimated cost of determining allowances by Ratio-Delay is about one-fourth to one-half that of timestudy.

(2) There is less chance of obtaining misleading results as the operators are not under close observation for long periods of time.

(3) Observations may be taken over a period of days or weeks, thus decreasing the chance of day-to-day or week-to-week variation affecting the results.

(4) This type of study may be interrupted at any time without affecting the results.

(5) The Ratio-Delay method may be used to analyze an entire department for the purpose of methods improvement.

(6) It is possible by this method to obtain delay allowances on operations where timestudy is not feasible. Examples of operations such as these are: Assembly lines, multiple-men molding

	Ratio-Delay Method		
Operation	Delay Study "A"	Delay Study "B"	Timestudy
Bench Coremaker			
Delay Allowance	= 8.7%	7.6%	6.4%
Personal Allowance	= 3.9	4.7	5.2
Total Allowance	= 12.6	12.3	11.6
Core Blowing Machine Operator			
Delay Allowance	= 7.7%	7.7%	6.4%
Personal Allowance	= 4.5	5.4	5.4
Total Allowance	= 12.2	13.1	11.5

units, and other group operations. All members of the group may be included in one study by Ratio-Delay but numerous studies may be required by timestudy for equally accurate results.

PROBLEMS AND SOLUTIONS

In applying this method of delay study to the industrial field several practical problems were encountered. A list of the problems faced and a brief discussion of the manner in which they were solved is given as follows.

(1) Difficulty was experienced in determining whether an operator was working on an incentive or hourly paid operation. Only observations of operations on incentive work were recorded since the obtained delay allowances were to be applied to incentive work. In cases of doubt, either the foreman or operator was questioned, or it was determined if a time standard had been established on the operation that was being performed. After a brief period the observer was able to familiarize himself with the work so that he could distinguish between incentive and hourly paid workers.

(2) Care had to be exercised in obtaining a representative sample. If an unusual proportion of the observations were taken at the beginning or end of the day, the delay percentage might be higher than should be expected. To counteract the possibility of a bias, approximately the same number of observations were taken during each hour of the day.

(3) In some cases the observer faced a problem in determining the cause or type of delay. When the operator was absent from his workplace, he had to be located and his delay cause determined. If he could not be located, the observer waited until the operator returned since interrupting the study does not affect the results. Rarely was it necessary to await the return of the operator to determine his delay cause. This was especially true when the group covered was within one department.

(4) It was necessary for the observer to use judgment in discerning whether delays were avoidable or unavoidable but in most cases it was readily apparent. The delay in talking to other operators or truckers was one in which the observer experienced difficulty. It was felt that a certain amount of exchanging of information was necessary. Correct decisions of this type must depend upon the exercise of good judgment by the observer.

(5) No observations were recorded during cyclical delays such as authorized rest periods or lunch periods. A provision was made for these delays by adding their respective allowances to the obtained allowance percentage of the Ratio-Delay method. This results in a correct over-all allowance percentage.

(6) The determination of the time interval between observations also posed a problem. Enough time must elapse to assure the observer that independent readings are being obtained. A practical expedient employed was the spacing of the intervals so that they were slightly greater than the maximum time-length of the normal delays. In cases where a delay lasted into the second round of observations, no second recording was made. Each delay was only recorded once as it is upon the number, rather than the duration of the delays, that the Ratio-Delay theory is based.

EFFECT ON EMPLOYEES

Adverse worker reaction did not cause any difficulty during any of these studies. In all cases the purpose of the procedure was briefly explained to the foreman and to the union stewards if the plant was unionized. If during the study, any worker questioned the observer's actions, the purpose was briefly explained to him. The operators worked in a normal manner after becoming accustomed to seeing the observer. Since operators were not observed continuously, and stop-watches were not used, there was no apparent unfavorable reaction among the workers. Production records were checked for the days during which the study was taken to determine if production was being affected. No appreciable variation in performance was found.

OTHER ADAPTATIONS

The Ratio-Delay method has further industrial applications other than for the determination of allowances.

It may be used as a tool for increasing efficiency by exposing delay sources.

It may be used to determine machine utility or operator utility percentages.

An operation analysis by percentage may be found for purposes of cost control and accounting.

It may also be used to obtain a plant or departmental efficiency or productivity index.

The writers have also used this method industrially in making a methods and delay allowance study on a twelve-man molding unit in a foundry. It has been used in determining inspectors' utility percentages and in determining delay occurrences in laundry operations.

In all these investigations, the economy, accuracy, and the versatility of the method has been clearly demonstrated.

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Time Study Research
Part III
Secondary Adjustments

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Further development of the secondary adjustment in rating time studies. Factors for adjustments and a typical application are described.

THE preceding articles* were devoted to the problem of adjusting the time values obtained during a time study to those which would have been obtained had the observations been made on the standard type of individual working at the standard pace. It was suggested that in the conventional procedure the difficulty of the job was first mentally evaluated to form a concept of a reasonable pace against which to compare the pace actually observed. The difficulty of making consistent judgments with such a measuring unit, which changes from job to job, was indicated. Hence, it was proposed that pace first be judged against a uniform unchanging yardstick of pace, thus easing the judgment and increasing its accuracy and that the difficulty of the job be taken into account as a second step. It would appear that this second step may then be performed in a reasonably objective fashion. In short, it would appear that a simple change in the time study procedure, reversing the usual order of events, will greatly improve the process but is really not essentially different. Hence, if the final standards are to represent a consistent concept of exertion, relative to physical capacity of the standard type of man on the specified job, the difficulty of the job must still be taken into account but this is to be done after rather than before rating pace. This is the nature and purpose of *the secondary adjustments.* (In the original proposal made by the author[1] these were called allowances. Because of the varied use of this term in the field the term *allowance* has been set aside to cover simpler and more empirical adjustments such as personal time while the corrections required by the use of a single-standard pace rating system have been renamed, *secondary adjustments. Allowances* are discussed in the next article.)

It should be obvious that if we were to multiply the obtained time by the single-standard pace rating factor alone, we would obtain the time for the job which would have been taken had the person performed the movements of the job at the same speed as the standard pace. Since the standard pace is the same for all jobs we can see the undesirability of stopping at this point. Different jobs would present different difficulties, even to the type of man called for in the definition of standard time, causing even him to perform them at different paces if he maintained his level of physical exertion constant at the rate called for in the definition of standard time. We must remember that this was stated as relative to his capacity, consequently it does not represent a fixed metabolic rate. The physical work output or metabolic consumption will vary with the muscle groups involved and the relationship between extrinsic work (parts handled) and intrinsic work (body members moved). The secondary adjustment therefore does not represent time for rest but an increment of time added to the time for the element at standard pace so as to permit the work to be performed at the standard rate of exertion called for in the definition of standard time.

The work of developing these secondary adjustments is by no means complete but even at their present stage of development they should offer a much more satisfactory and reliable procedure than leaving the adjustment to the mental evaluation of the timestudy man. If inconsistencies appear with this proposed procedure, then the source may be traced and lasting corrections made, which course of action is not possible with the conventional approach. The reduction of such secondary adjustments to tabular form should remove an additional source of subjectively caused variation from the time study procedure and should thereby aid in meeting objections such as those raised by Gomberg[2] and other forward looking analysts.

The work on secondary adjustments was begun by postulating the factors which affected maximum possible job pace as indicated by experimental or practical evidence. It is to be noted that not all of these were at first identified but the following is the list at present:

1. Total amount of body involved in element[3].
2. Foot pedals used during the element[4, 5].
3. Bimanualness of element[3].
4. Eye-hand coordination required to perform the element[6, 7].
5. Handling or sensory requirement of the element[8].
6. Resistance which must be overcome on the element, that is, thrust on levers or weight lifted.[9]

Percentage adjustments were then calculated from these data with the realization that most of them, particularly the

*Part I—June 1950, *Advanced Management*
Part II—August 1950, *Advanced Management*

[1]See page 22 for all references to Bibliography

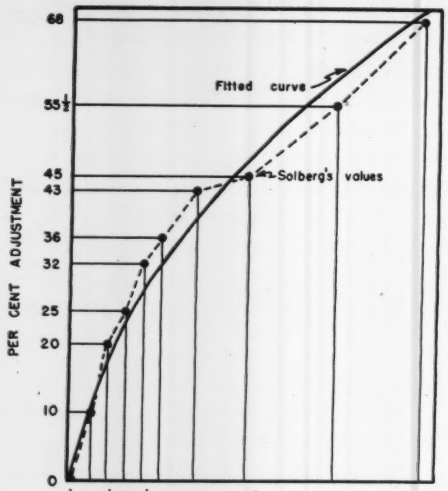

Figure I.
(Showing Origin of Fig. 2.)

Iowa experiments, were performed at maximum pace and it was anticipated that this, in some cases, possibly maximized the indicated per cent difference. It does not appear unreasonable to suppose that the more extreme conditions of work would have benefited more from training than the simpler conditions. Inasmuch as almost all operators tested were relatively untrained student volunteers the obtained differences were scaled down in many cases for initial application. Also, some of the experiments emphasized the difficulty increment by increasing its importance in the cycle or element through a reduction of all other usual variables and sources of time consumption. The results of these experiments were also scaled down.

On a rather informal basis, using the same operator and the same exertion, pairs of jobs as available were compared in respect to the time taken on various elements. (Time study experimentation in industry is unfortunately often affected by expediency and the author must confess that this initial experimentation which was conducted on an industrial job during 1939 and 1940 suffered from this not unusual feature. However, this early experimentation indicated that the basic philosophy was correct and considerable experimental evidence from controlled experiments is presently available and is included in this discussion.

The only difference between any pair of jobs was in a single factor such as, amount of body used, eye hand coordination required, etc. These informal experiments gave figures different than those obtained from the data previously footnoted (as were then available) and thus many of the original reductions were checked or modified. Time standards were set using these preliminary percentage adjustments and the results carefully observed. Minor adjustments were made in the percentages until the standards set in this manner predicted performance in an apparently consistent fashion. Such results were, of course, undoubtedly influenced by the tendency of the shop to "make the standards work" as noted in the first article in this series and also influenced by the small range of difficulty covered in the initial installation. Beginning in 1942 however, part of the Purdue Motion and Time Study Laboratory research activity has been directed at analyzing the characteristics of the rating procedure and the nature of the necessary secondary adjustments. The results of the studies of rating formed the background of the preceding article. The results of the studies into the secondary adjustments form part of the material of this article although they

TABLE 7

SECONDARY ADJUSTMENTS FOR TIME STUDIES

Category No.	*Description*	*Reference Letter*	*Condition*	*Per Cent Adjustment*
1	Amount of body used	A	Fingers used loosely	0
		B	Wrist and fingers	1
		C	Elbow, wrist and fingers	2
		D	Arm, etc.	5
		E	Trunk, etc.	8
2	Foot pedals	F	No pedals or one pedal with fulcrum under foot	0
		G	Pedal or pedals with fulcrum outside of foot	5
3	Bimanualness	H	Hands help each other or alternate	0
		I	Hands work simultaneously doing the same work on duplicate parts	10
4	Eye-hand coordination*	J	Rough work, mainly feel	0
		K	Moderate vision	2
		L	Constant but not close	4
		M	Watchful, fairly close	7
		N	Within 1/64 inch	10
5	Handling requirements*	O	Can be handled roughly	0
		P	Only gross control	1
		Q	Must be controlled but may be squeezed	2
		R	Handle carefully	3
		S	Fragile	5
6	Weight		Identify by the letter W followed by actual weight or resistance	See Fig. II.

*NOTE: These scales could possibly go much higher in some cases.

are by no means as complete as one could desire.

The Iowa experiments still constitute part of the source of data. Furthermore, only certain points in some of the scales have been determined; the rest of the scales for these factors have been set in "apparent" correct proportion. At any rate, the final values given in this chapter have been tried on several good sized applications and appear to function more smoothly than conventionally set standards. (The difficulties of precisely determining the accuracy of standards in the actual shop have been suggested several times. In addition, the variability of people, both in capacity and use of capacity tends to confound the variables.) The applications ranged from metal polishing to commercial laundry work.

The research is given in brief form inasmuch as including it in full would make the article too voluminous. It is to be noted that all the adjustments are indicated as positive increments of time above the time required at the standard pace, (film loop or concept of rate of activity). Hence, the film loop or concept should, at 100 per cent pace, represent the concept of standard time on an extremely simple operation. Also, these adjustments may only be used when all jobs are first rated against a single-standard pace which does not take job difficulty into account. Essentially the developed data are intended for use as follows:

1. Separate adjustments are to be made for each element. This would appear reasonable if we stop to consider a task such that for 10 per cent of the time the operator pushes a lever with a 10 pound resistance. Let us further assume that the rest of the task involves almost no weight or resistance but only such as would occur loading extremely light parts into a fixture. The element containing the heavy resistance could hardly be expected to be performed at the same pace as the rest of the job and vice versa. Consequently, each element will be adjusted separately.
2. The total secondary adjustment for an element will be the sum of all the appropriate values from the scales for all of the factors. As far as is known at present these factors are additive.
   No complex interaction has yet been found at the element level.
3. The secondary adjustments will be combined with the rating. If the rating was 90 per cent and the secondary adjustments 12 per cent, the observed time for that element will be multiplied by .90 x 1.12 or 1.01 (1.008). This will give the same result that would have been obtained had the observed time first been multiplied by .90 to bring it to the time required at the speed of the 100 per cent pace and then 12 per cent added to this product. The .12 and .90 cannot be added. Otherwise the actual increment would vary with the pace observed which would not be correct.
4. The factors for which secondary adjustments will be added are:
   1. Amount of body used
   2. Foot pedals
   3. Bimanualness
   4. Eye hand coordination
   5. Handling or sensory requirements
   6. Weight handled or resistance encountered

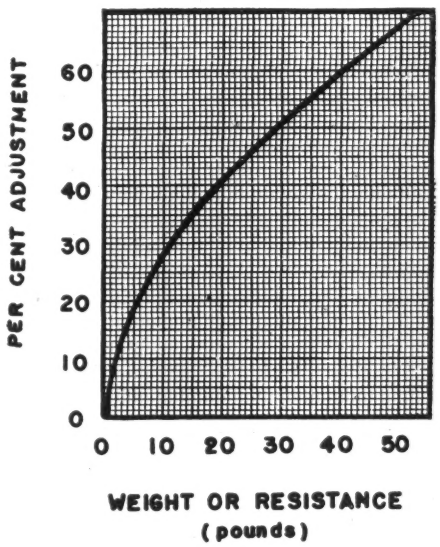

Figure II.

The secondary adjustments may be combined for use as shown in Table 7 on page 20.

The adjustments of Table 7 are to be used separately on each element. For instance, on an element in a foundry operation, consisting of moving a core plate and core totaling 21 pounds, using both hands and a rotation of the body about the trunk let us assume we obtained an average time from our actual observations of .16 minute. The rating of pace against the standard films was 60 per cent. The secondary adjustment from Table 7 would appear as shown below.*

Therefore the base time = .16 × .60 × 1.55 = .149 minutes.

This .149 minutes should be the time called for in our concept of standard time for the single cycle and is called the *base time*. Additional allowances, discussed in the next article will have to be added to make it represent "the allowed time" which is the time required to represent standard time on an all-day basis. It is to be noted that the secondary adjustment is not a measure of the rest time to accompany a job but a measure of the amount of time to be added to the time for the element at standard pace so that the final time will represent the time for the element at the standard relative rate of exertion.

It is desirable to show the details of these secondary adjustments on the actual time study to facilitate checking and the reference letters are provided for that purpose.

The presently available data for secondary adjustments leaves much to be desired. However, they certainly,

***Adjustments for moving core plate as described above**

Category	*Reference Letter*	*Per Cent*
1. Amount of body	E	8
2. Foot pedals	F	0
3. Bimanualness	H	0
4. Eye-hand coordination	K	2
5. Handling requirements	Q	2
6. Weight	W21	43
Total secondary adjustment		55

even in their present state of incompleteness, should offer a more consistent basis from which to work than the conventional procedure in which the time study man subjectively evaluates the difficulty of the job in order to form a mental image of a suitable pace to which to compare that which he observes. Indeed, it is the gross unreliability of such a fully subjective procedure that makes such meager data as are available, preferable. They are so meager that collective bargaining over the percentages presented in Table 7 is at present quite conceivable provided both parties recognize that their application may indicate the need for and the magnitude of subsequent necessary additional corrections. If rates are not consistent in ease or difficulty, the elements of sameness in the malfunctioning rates may be compared and corrections in the table of secondary adjustments will be indicated.

The problem of the secondary adjustments is indeed a fertile field for additional motion and time study research. The Purdue Laboratory is continuing its research program using three basic approaches; the time measurement technique used in most of the data reported, a metabolic measurement approach and a biomechanical approach in which the kinetic energy involved in various types of movements is mathematically determined. It is hoped that considerable additional information will be available in several years but the field is certainly vast enough to merit simultaneous activity by other University laboratories.

It is also interesting to note that the basic philosophy of the secondary adjustment makes the time study also a motion study technique. For the most part, changes which will reduce the adjustments will also facilitate the task, consequently these values may be used as a guide toward better methods.

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MANAGEMENT BOOKS *Received*

Financial Reports of Labor Unions, by GEORGE KOZMETSKY, 280 pages, Cambridge, Division of Research, Harvard Business School, $3.50

Rating Employee and Supervisory Performance, by DOOHER & MARQUIS, 192 pages, New York, American Management Association, $3.75

Industry's Unfinished Business, by SARA E. SOUTHALL, 173 pages, New York, Harper and Brothers, $2.50

Scientific Research: Its Administration and Organization, by BUSH and HATTERY, 190 pages, Washington, D. C., American University Press, $3.25

Management in Motion, by NEIL W. CHAMBERLAIN, 124 pages, New Haven, Yale University, Labor and Management Center

The Principles of Scientific Research, by PAUL FREEDMAN, 222 pages, Washington, D. C., Public Affairs Press, $3.25

A Framework for Long-Range Agricultural Policy, by HELINE & KALDOR, 68 pages, Washington, D. C., National Planning Association, $.50

Industrial Organization and Management, by BETHEL, ATWATER, SMITH, and STACKMAN, 851 pages, New York, McGraw Hill, $5.50

Plant Layout and Materials Handling, by JAMES M. APPLE, 367 pages, New York, Ronald Press Company, $5.00

Proceedings of the Fifth Annual Time Study and Methods Conference (SAM & ASME), papers presented by 15 outstanding practical authorities, 144 pages, SAM, 84 William Street, New York City 7, N. Y., $5.00 to nonmembers, $3.00 to members.

Progress Report on Office Standards Project

By E. LESTER PHY
Manager, Systems and Procedure Department,
Continental Can Company, New York

and ALEX W. RATHE
Chairman, S.A.M. Office Standards Committee

Outline of a long-term project aimed at establishing standards for office equipment, forms, supplies and machines.

THE Office Standards project aims at the formulation of American Standards which apply to the broad field of management and operation of an office. It includes dimensions, quality, performance characteristics, methods of testing and nomenclature for . . .

(1) Office equipment (such as desks, chairs, tables, safes, etc.),
(2) Paper used in the office (including bristols, bonds, ledgers, etc.),
(3) Forms, records, and procedures,
(4) Office supplies (such as pencils, binders, erasers, staplers, etc.) and,
(5) Business machines (such as adding, calculating, dictating machines, typewriters, etc.).

2. PROJECT STRUCTURE

Under the sponsorship of the National Office Management Association (NOMA), the American Standards Association (ASA) carries out the project through an elaborate committee organization with the following major components:

(1) The Sectional Committee is the governing body; it is charged with the general supervision and administration of the entire project, and attainment of the final consensus among broadly interested groups.
(2) Five subcommittees and their various Subgroups; their task is the development of drafts of the individual standards and the attainment of a consensus among those directly interested in the specific standards.

3. COOPERATING ORGANIZATIONS

More than 40 national organizations are cooperating in the Project. They represent a cross section of interests in the purposes of the project, such as:

(1) Manufacturers (Office Equipment Mfrs. Association and many others),
(2) Distributors (Wholesale Stationers Association and many others),
(3) Users (National Association of Purchasing Agents and many others) and
(4) Parties who have a general interest in standardization (such as American Institute of Accountants, SAM, Systems and Procedure Association of America, and again many others).

4. SAM REPRESENTATION

SAM is represented in this project by E. Lester Phy, Manager of the Systems and Procedure Department of Continental Can Company, New York; Mr. Phy is a member of the Subcommittee #3 (Forms, Records, and Procedures), and Alex W. Rathe, Associate Professor of Administrative Engineering, New York University, New York; Dr. Rathe is the Society's delegate on the Sectional Committee.

5. PROJECT OPERATING PROCEDURE

On behalf of each Subcommittee, various subgroups develop initial drafts of office standards. These drafts are reviewed, discussed, and finally voted upon by the Subcommittee concerned, which, in turn, forwards the drafts to the Sectional Committee for final review. Upon vote in the Sectional Committee, the drafts go to the Sponsor (NOMA) for submission to ASA prior to final publication.

This procedure reflects the deliberate attempt of providing multiple opportunities for all interested parties to consider the varifold aspects which standardization has for the manufacturer, distributor and user of items such as were outlined under (1).

6. OPERATING RESULTS

The Office Standards Project represents a gigantic undertaking whose lifetime is likely to extend beyond one generation if lasting results are to be expected. Organized just a few years ago, it is perhaps indicative of the success which may be expected in the future that it has been possible to conclude during the past twelve months the tedious tasks of organizing and staffing the project and of developing uniform procedures and methods of attacking the problems in

the various Subcommittees as well as of coordinating and integrating often divergent opinions through the Sectional Committee.

Beyond that, however, it is gratifying to report that at this time, ten drafts of standards have reached the balloting state; they are

standards for three grades of sulphite bond papers

Basic sheet sizes for bond papers and index bristols

standard size designation for index and record keeping cards

specifications for non-carbonized, single ply, adding machine paper rolls

specifications concerning dimensions of desks and tables for general office use

a guide for establishing and maintaining a forms control program

a check list for printing specifications for business forms

specifications for bank checks

Progress in drafting and agreeing upon standards in a field as diversified as that covered by this Project is, of necessity, a slow process. It would be unlikely to expect a considerable increase in speed for the immediate future in which the entire project machinery is undergoing something like a shakedown cruise. However, three to five years hence, matters may be expected to move at an increased rate. It is the firm conviction of SAM's and other representatives that this approach is sound because it provides for evolutionary acceptance of the aims and results of the project and avoids the disturbing influence which hasty pace is so often likely to produce. We warmly recommend continued support of the Project by the Society for the Advancement of Management.

The Proceedings of the Fifth Annual Time Study and Methods Conference

(Hotel Statler, N.Y.C., April 20th and 21st, 1950)

FOR PERMANENT REFERENCE, THE ONLY COMPLETE COPY OF ALL THE VITAL PAPERS PRESENTED AT THE OUTSTANDING INDUSTRIAL ENGINEERING EVENT OF THE YEAR

The Human as a Tool of Production, by Peter Drucker, Industrial Economist

Improving Methods on Indirect Work, by Charles A. Woodley, Assistant General Factory Manager, Caterpillar Tractor Company

Setting Standards on Office Work, by Paul Mulligan, Consultant

Setting Standards on Maintenance or Other Indirect Work, by H. J. Moore, Charge of Standards Programs, Swift & Co.

Wage Administration, by Harold C. Zulauf, Vice President in Charge of Operations and Industrial Relations, Alexander Smith & Son Carpet Co.

The Potentials of Automatic Production Methods, by H. E. Blank, Jr., Editor, Modern Industry

Design for a Methods Training Course, by Ralph M. Barnes, Professor of Engineering & Production Management, University of California

Methods—Time Measurement, by Robert C. Rick, Prod. Mgr., American Greeting Publishers

Inequities in Incentives, by William J. Millett, Assistant to Vice President, Charge of Manufacturing, Worthington Pump & Machinery Corporation.

Application of Allowances, by Ralph Presgrave, Vice President, J. D. Woods & Gordon Ltd.

Rating of Time Studies, by Herbert A. Lynch, Jr., Project Engineer, S.A.M. — New York University, Rating of Time Studies Project.

Maintaining Standards Under Changing Conditions, by H. H. Whitmore, Treasurer and General Manager, Jones & Lamson Tool Co.

Setting Standards on Paced Jobs, by James M. Apple, Associate Professor, Industrial Engineering, Michigan State College

How Many Machines Per Man? by M. F. Macaulay, Manager of Manufacturing Control, Packard Motor Car Company

Balancing Loads and Incentives on Group Activity, by R. C. Rankin, Chief Industrial Engineer, Castings Division, Aluminum Company of America

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The Management Bookshelf

The Scientific Appraisal of Management by JACKSON MARTINDELL, Harper & Brothers, 278 pages, $4.00.

THIS book deals with the problem of evaluating top administrative management. Its author has had a career as a financial writer, executive and investment counsel. He approaches the problem from a financial viewpoint, as would be expected.

The author states in his preface that the book is addressed to those who are interested in the main problem of management evaluation: "To decide exactly where to start; by what process of logic to proceed; how to resolve factual observations into objective evaluation."

Mr. Martindell has summarized his philosophy in Chapter XIV — *"The Principles of Excellent Management."* He points out that there are almost no inflexible rules for the evaluation of management. The corporation is not static, and management is complex. The factors common to all joint-stock companies, separately and collectively, resolve into the one common principle that excellent management consists of unflinching control. The corporation is not a democracy.

Intimate knowledge of a company's officers is, therefore, the first indispensable step towards management appraisal. The stage of evolution of a corporation must be examined carefully before we can decide whether the chief executive is the type of man required to lead and oversee the operations. Since management is a human function, the question of who, as an individual, exercises authority and where it is concentrated in the formal structure of the organization is of paramount importance.

Evaluation of the board of directors resolves itself into estimating the wisdom, integrity, and business experience of each individual member. Important considerations are the ages of directors, and the extent to which the board is dominated by a minority group. A company possessed of an outside board is generally to be preferred.

The product-division form of organization is a true expression of large scale business. Its evaluation demands separate, detailed examination of each corporate unit. Location of plant and the reasons for product emphasis in production and sales are indispensable to the management audit. It must be asked of every plant and of each major product why it is located where it is and why it is produced. If the answers to these two questions do not convey a sense of controlled purpose, then it is to be presumed that there are serious weaknesses in the management in question. Teamwork is of the essence in the modern corporation in the accomplishment of its purposes.

FINANCE AND PRODUCTION

Financial analysis should be made with respect to significant time periods through which the corporation has passed. Superior management takes due account of business cycles, but does not place faith in their unvarying periodicity. Superior management does not borrow on long term except as a last resort. No management can be classed as excellent, if, having borrowed money for any purpose whatever, it simultaneously pays unusually high dividends. The existence of rigid sinking fund provisions in debenture indentures, for example, is usually an evidence of superior management. The relationship of dividend payments to current earnings, the amount of convertibility of bonds or preferred stocks to common stock are also means of measuring the effectiveness of management. It is a mistake, nevertheless, to attempt to judge management mathematically by the benefits accruing to common stockholders.

Efficiency and production in the manufacturing organization may determine the whole future of the enterprise. It must be examined with respect to the efficient, effective use of capital and labor, as well as the application of industrial technology. The tendency of the average corporation is towards even larger scale operations, and of the smaller company towards achievement of elementary mass production dimensions. The economic advantages of mass production are a feature of the concentration of capital. The production efficiency of a corporation must be calculated with reference to size of market.

(Continued on Page 28)

THREE BOOKS THAT OFFER YOU ANSWERS TO MANY OF YOUR MANAGEMENT PROBLEMS

The Scientific Appraisal of Management

A Study of the Business Practices of Well-Managed Companies

By **JACKSON MARTINDELL**, *President, American Institute of Management.* Here is a practical, common-sense system for measuring the present standing and future possibilities of your company. Mr. Martindell carefully examines every phase of management function—board of directors, organization, finances, dividend policy, production record, research and sales management. Numerous examples show you specific instances of good and poor management; a Comparative Evaluation Table and a Management Audit Questionnaire enable you to compare the merits of different companies. "A valuable working tool."—*American Business* $4.00

Bonds of Organization

An Appraisal of Corporate Human Relations

By **E. WIGHT BAKKE**, *Director, Yale Labor and Management Center.* A significant book on bridging the gap between your formal personnel structure and the actualities of human relations in your business. BONDS OF ORGANIZATION lays the foundations for a system that organizations can apply toward the long-range improvement of morale and productive efficiency. "Worthy of a treasured place in the bookshelves of forward-looking industrial relations and personnel executives."—*NAM NEWS* $4.00

Industry's Unfinished Business

Achieving Sound Industrial Relations and Fair Employment

By **SARA E. SOUTHALL**, *Formerly Industrial Relations Executive, International Harvester Company.* The harmonious inclusion of minority group employees in industrial staffs is becoming increasingly important to sound personnel practice. In detailing the policy which has been successfully employed in numerous companies, this book makes a unique contribution toward the overall solution of the problem. "An outstanding contribution to the history of industrial relations and to the cause of fair employment in the U. S."—*Lawrence A. Appley, Pres., American Management Association, Inc.* $2.50

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SOCIETY NEWS

MICHIGAN STATE presented a five day Industrial Engineering Conference from September 11 through September 15 at East Lansing, Michigan. The following SAM members participated in the Conference as instructors: James M. Apple, Chester Brisley, Ben S. Graham, A. C. Cyrol, Owen A. Goodrich, Herbert A. Lynch, Jr., Richard S. MacKenzie, Robert H. McKay, Edmund Plant, Wallace J. Richardson, Joseph G. Surmacz.

A. B. VESTAL has joined the staff of *Edwards & Barnes*, management consultants, Pittsburgh, Pa.

KANSAS CITY CHAPTER heard *Dillard E. Bird*, National President of S.A.M., as the main speaker at their September meeting. Mr. Bird spoke on, "*Impressions of the Situation in Germany.*" *Samuel M. Roberts*, Director of Research and Budget for the *City of Kansas City*, acted as Chairman of the meeting.

THE MANAGEMENT INSTITUTE Program of *New York University*, Division of General Education, is described in a new booklet covering the Fall term of 1950. Unified programs of training in the following fields are available: Personnel, Industrial Relations, Systems and Procedures, Business and Small Plant Management, Foreman and Supervisory Training and a special group of business and professional courses. Booklet may be obtained from them at Washington Square 3, N. Y.

THE CINCINNATI CHAPTER presented a talk by *Tell Berna*, General Manager of the *National Machine Tool Builders' Association*, on "*The Effect of Legislation on Productivity*" at their September meeting.

MILWAUKEE CHAPTER'S September 14th meeting was highlighted by the appearance of *Fred V. Gardner*, of *Fred V. Gardner and Associates*. He spoke on, "*Elements of Costs.*" The October meeting, scheduled for Oct. 12 will be devoted to "*Training Executives.*"

Emerson Trophy Standings
Chapter Performance Award Plan—As of August, 1950

CHAPTER	TOTAL
Los Angeles	156
Washington	146
Philadelphia	114
New York	72
Houston	61
San Francisco	57

WASHINGTON CHAPTER President, *Mary Cushing Niles*, announces the following September and October meetings: Sept. 28, *Information Function As A Part of Management*, Bruce Quisenberry, Chrmn.; Oct. 3, *Federal Property and Administrative Services*, William C. Cleary, Chrmn.; Oct. 5, *Management Problems of Other Governments and International Agencies*, S. McKee Rosen, Chrmn.; Oct. 10, *Accounting*, Walter F. Frese, Chrmn.; Oct. 12, *Management Case Problems* (Seminar), W. F. Finan, Chrmn.; Oct. 17, *Work Standards and Reporting*, Warren B. Irons, Chrmn.

DR. NORBERT WIENER, author of "*Cybernetics*" and "*The Human Use of Human Beings*", will be the main speaker at the New York Chapter's meeting, November 16. *Dr. Alex Rathe* of New York University, is chairman of the meeting.

Dr. Wiener is expected to talk on "*Cybernetics and Management*".

SAM and ASME are jointly sponsoring the technical sessions of the Plant Maintenance Show to be held in the Cleveland Auditorium, January 15 through January 18, 1951. *James Eddy*, SAM Director of Industrial Engineering, has been appointed to the Show's advisory committee. *L. C. Morrow*, Editor of Factory, is chairman of the committee. ASME is represented by *Colonel Gilbert I. Ross.*

SUMNER D. CHARM has been appointed Associate Professor of Industrial Administration at Carnegie Institute of Technology.

CENTRAL PENNSYLVANIA CHAPTER'S September meeting centered around a talk by *J. T. Williams, Jr.*, on, "*The Hoover Report.*" Mr. Williams is Assistant to the Works Manager, Altoona Works, *Pennsylvania Railroad*. Their October 19th meeting is scheduled to hear *Mr. J. W. Reichenbach*, Director of Wage Incentives, *Westinghouse Electric Corp.*, speak on "*Performance Rating.*"

SAN FRANCISCO BAY CHAPTER at its September meeting heard *J. T. Brickley*, Personnel Department of *Columbia Steel Company*, speak on "*Telling the Employees.*"

DR. HALSEY E. RAMSEN, of the Cincinnati Chapter and Head, Dept. of Industrial Management, School of Business Administration, *Miami University*, Oxford, Ohio, received the honorary degree of Doctor of Laws from *Hanover College.*

NEW YORK CHAPTER will present a special "off-the-record" Panel Discussion on "*The Impact of the Korean War*" at its dinner meeting, September 21, 1950 at the Brass Rail Restaurant. Panel members will be: *Major General Lewis B. Hershey*, Selective Service Headquarters; *Major General Jerry Matejka*, Munitions Board; *Robert L. Clark*, Director of Manpower Office, N.S.R.B.; *R. E. Gillmor*, Vice President, The Sperry Corp.; *Hiram S. Hall*, Vice President and Director of Personnel Administration, Bigelow-Sanford Carpet Co., Inc.; Howard L. Richardson, Director of Industrial Relations, Sylvania Electric Products Co.; *Dwayne Orton*, Vice President and Director of Education, IBM.; *Forest Lambaer*, Corporate Personnel Division, R. H. Macy & Company, Inc.

General Chairman for the meeting is N. Y. Chapter National Director, *Dr. F. F. Bradshaw*, president of Richardson, Bellows, Henry & Co., the panel chairman will be *Professor Joseph M. Juran*, Chairman of the Department of Administrative Engineering, New York University.

MRS. WALLACE CLARK, who has headed Wallace Clark & Co., international management consulting firm, since her husband's death in 1948, announces the incorporation of the business under the name of *Wallace Clark & Company, Incorporated*. Mrs. Clark, as president will direct the activities of the new company while technical aspects of the work will remain in the hands of senior staff engineers who were trained by Mr. Clark. Directors, in addition to *Mrs. Clark*, are *Alfred C. Bruce, William E. Camp, J. Coburn Musser, William B. Nichols*, and *David Remer.*

Industrial Relations Roundup

Union-Shop and Check-Off Trend: Analyzing 2,159 labor-management agreements (covering about four million workers during 1949) revealed that 50% of them included union-shop clauses. Check-off provisions were found in about 66% of the agreements according to the Bureau of Labor Statistics.

The 1,080 union shop agreements were divided as follows: 987 with a clause providing that new employees, not union members, must join within a specified time after starting work; 93 with a clause stipulating that employees must be members of the union before beginning work.

"Making Grievance Procedures Work" is the title of an illustrated 36 page pocket-size pamphlet by *Abbot Kaplan.* Based on a study of nearly 100 representative contracts it is an introduction to the establishment of and conduct of grievance procedures. Single copies are available at $.25 each from the *Institute of Industrial Relations,* 100 Business Administration-Economics Building, University of California, Los Angeles 24, California.

Keystone Steel and Wire Company, Peoria, Illinois, tells its employees about the results of operations in a booklet, *"Keystone Reports to You".*

Employee payments earned under their profit sharing plan are reported as follows:

You benefited when the teamwork at Keystone resulted in the highest profits in the Company's history. You benefited directly when profit sharing checks totaling $413,861 were distributed to 1,997 eligible employees. This amount, 6% of the net profit from operations gave you $215.59 if you worked the full 50 weeks. The table below shows the total amount of profit distributed under this plan over the last few years.

Date	Amount Paid for 50 Weeks Worked	Total Paid
1950	$215.59	$413,861
1949	100.75	181,545
1948	121.84	225,249
1947	158.39	279,018

The booklet is illustrated with photographs, charts and sketches. The report uses the "you" technique throughout and opens with a letter from *Reuben E. Sommer,* President and General Manager.

"Manpower Planning for National Emergency" is the title of a special report prepared by the *Metropolitan Life Insurance Company.* It is designed to assist management in locating the most likely problem areas in emergency planning.

To provide practical guidance in manpower planning the report examines the following: the manpower problem; placing the responsibility for planning; the company's role during national emergencies; conducting and analyzing an audit of current personnel; filling the manpower gaps; company policies regarding national emergency leaves; and other considerations such as civil defense and safeguarding health, safety and security of employees.

The report also shows the emergency plans and activities of business organizations and chambers of commerce; deferment guides, methods of rating manpower utilization, and a preparedness check list for management.

While the supply lasts copies are available at no charge. Request *Booklet MP9501 from Advanced Management, Readers' Service.*

"Good Faith" Yardstick for Opening Company Books to Union. Recent decisions by *National Labor Relations Board* indicate that employers are expected to demonstrate cooperation in supplying information before NLRB will permit them to with-hold details about wage data and financial condition. Union representatives must be reasonable in demands for accounting records before they can compel employers to reveal books, states the *Labor Law Journal.*

The Board ruled that an employer who insisted he was financially unable to give increases was not bargaining in good faith when he refused to give the union any facts about his financial condition.

In another case, however, the Board ruled that an employer need not submit information entirely as requested by the union. It was considered bargaining in good faith when the company refused a written list of employees and their wages but gave approximately the same information orally.

There is no fixed rule but decisions indicate that unions must be given sufficient information to enable them to understand, discuss, and bargain intelligently about wages.

CSA Newsletter reports that: "An Australian court has held that an employee who yawns at work and dislocates his jaw is entitled to unemployment compensation until he recovers. (This opens the way to many possibilities not to be sneezed at.)"

Harold S. Falk received the *1950 Industrial Relations Achievement Award* presented by the *National Metal Trades Association.*

Almost 13,000,000 days were lost in the coal industry and at Chrysler plants during the first quarter of 1950 according to a report in the *Labor Law Journal.* These two strikes accounted for 85% of time lost through all work stoppages during the quarter.

Labor-Management Correspondence. An unusual exchange of letters made news recently when *Doehler-Jarvis Corp.* and the *UAW-CIO* (Locals 1057 and 1058) concluded a new five year agreement.

Copies of the two letters were reproduced side by side in full page newspaper advertisements published in the *Toledo Times, Toledo Blade, Batavia News* and *Pottstown Mercury.* The advertisement was also run by the Company in the *Toledo Union Journal,* the official publication of the Toledo Industrial Union Council CIO.

H. H. Doehler, Chairman of the D-J Board, wrote to the Union: "I acknowledge with appreciation the excellent work done by you and your associates in conjunction with management representatives in concluding our 5-year agreement . . . That same cooperative spirit that helped us so much in the past is again embodied in our new contract. It is due to that constructive spirit . . . that we have grown and that we are planning to grow further. . . . We believe there are great possibilities of social and economic advancement by full-hearted cooperation and harmony between employee and employer."

Richard Gosser, vice-president of the International UAW-CIO and other union representatives replied: ". . . We are proud of the excellent relations that have prevailed for so many years between your Corporation and our Union. . . . You appreciate our problems. We appreciate yours. That is why we grow. . . . We only wish that others could learn the simple lessons of our association."